Algonquins of Ontario | TAGGART GROUP OF COMPANIES | CAIVAN COMMUNITIES

# TEWIN

# Mobility Strategy

## Transportation Master Plan for the Tewin Community

April 2026

**Submitted for City and Agency review**

## Land Acknowledgement

Tewin is located on the ancestral and unceded territory of the Anishinaabe Algonquin Nation. Algonquin peoples have lived on and cared for this land since time immemorial and continue to do so today.

The name “Tewin,” meaning “home” in the Algonquin language, reflects this deep and ongoing connection. This land holds stories, responsibilities, and relationships that remain central to Algonquin life and identity.

The planning and design of Tewin have been guided by the knowledge, perspectives, and teachings shared by Algonquin community members and traditional knowledge keepers. Their contributions have shaped how the land is understood, honoured, and integrated into the vision for Tewin.

This acknowledgement reflects a lasting commitment to honouring Algonquin presence in Tewin - now and for generations to come.

# Acknowledgement

Tewin is a once in a generation development, as noted throughout this Mobility Strategy. It is also a once in a career opportunity and an honour to contribute to the creation of a community like Tewin.

We would like to thank those that provided us with the opportunity to support this project and acknowledge their community planning leadership.

*Algonquins of Ontario*

*Taggart Group of Companies*

*Caivan Communities*

Along with technical partners

*Urban Strategies, Urban Equation, DSEL, Paterson Group, JFSA, Wendy Nott, NAK Design Strategies*

The complexity of this Mobility Strategy required the support of many transportation planning and traffic engineering disciplines, and professionals, from various organizations, all of whom worked collaboratively to achieve this unique mobility solution for Tewin.

*TraffMobility Engineering Inc.*

*Dillon Consulting Ltd.*

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*Sympatric Ltd.*

*David Krieger Consultants Inc.*

*Current and past members of the CGH Transportation Team*

Along with

*City of Ottawa Transportation Planning Staff*

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# 1 Executive Summary

The Transportation Master Plan for the Tewin Community (herein referred to as the “Mobility Strategy” or “Strategy”) presents a transformative approach to integrated community building and recommends transportation infrastructure to serve the Tewin Urban Expansion Area according to the Municipal Class Environmental Assessment (MCEA) process. Concurrently, it also supports the preparation of a Secondary Plan and other Planning Act applications, ensuring consistency and coordination across planning and environmental approval frameworks.

Located in southeast Ottawa, the Tewin community is envisioned to accommodate a potential population over 58,000 residents, offering a generational opportunity to plan for mobility from the outset. Rather than replicating legacy car-dependent suburban patterns, this Strategy advances a "Decide and Provide" approach to transportation planning, defining desired mobility outcomes first, then structuring land use, networks, and policy around them. This method ensures the success of multimodal travel from day one and avoids retrofitting outdated systems in the future.

Rooted in Algonquin values of environmental stewardship, collective responsibility, and connection to the land, the Tewin Mobility Strategy emphasizes a holistic, community-first philosophy. The Strategy is aligned with the City of Ottawa’s Official Plan (OP), including its Five Big Moves, the Transportation Master Plan (TMP) 2025, the Building Better and Smarter Suburbs (BBSS) initiative, and the One Planet Living framework. Each of these plans and principles informed the Strategy’s structure, ensuring it reflects current best practices in transportation planning, climate resiliency, and complete communities.

The mobility framework is anchored by a continuous, centrally located Mobility Spine, a multimodal corridor that concentrates transit, walking, cycling, and higher-density development in a coherent and accessible structure. This corridor enables a true multi-modal community, where most residents live within a short walk of transit and local amenities. The Spine is reinforced by a loop collector road and a connected grid of neighbourhood collectors and local streets that maximize permeability and active transportation connectivity.

Tewin’s internal transit strategy provides high coverage from day one, supported by strategic bus lanes, transit signal priority, and a grid-based local street network that further supports transit accessibility. Key land uses, such as schools, community amenities, and commercial nodes, are positioned near the Mobility Spine to enhance ridership and minimize conflicting operations.

Active transportation is a defining feature of the Strategy. The network includes winter-maintained cycling facilities and multi-use paths, as well as seasonal recreational trails that weave through natural areas and complement the road grid. The entire active transportation system is context-sensitive and reflects a complete networks philosophy where the network accommodates everyone safely and comfortably regardless of the mode.

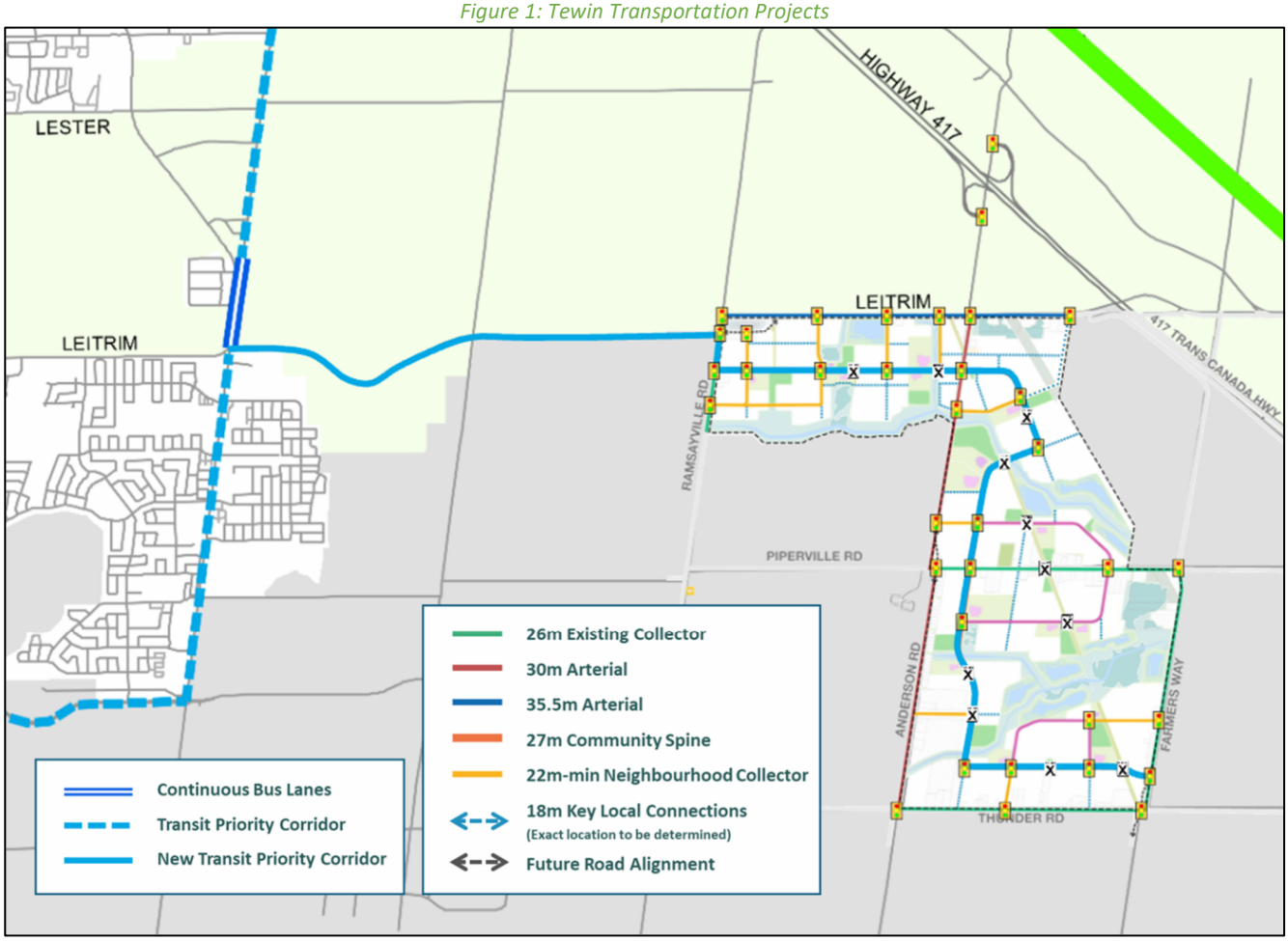
Cross-sections are tailored to context, with two final options for the Mobility Spine: one featuring unidirectional cycle tracks on both sides, and one with a bi-directional facility on a single side, depending on adjacent land uses. Roadway typologies include innovative designs such as shared streets, woonerfs, and special streets, furthering the goal of human-scaled, inclusive, and safe transportation infrastructure.

Transit integration has been carefully modeled using the TRANS 2046 model developed for the City TMP update, evaluating how two conceptual transit corridors from Tewin interface with the broader Priority Transit Network. These desire lines demonstrate that Tewin can be seamlessly incorporated into Ottawa’s transit vision under the City's 2046 growth scenario. This work affirms that Tewin's transit strategy aligns with the infrastructure already

envisioned by the City, while offering flexibility for route evolution over time. The road network was then assessed for compatibility with Ottawa's TMP 2025 Road Network, using the remaining auto trips generated by Tewin to model AM peak period volume-to-capacity ratios to confirm that planned infrastructure in the City's TMP update can accommodate projected demand. Below is a list of the recommended transportation projects:

1. Mobility Spine throughout Tewin community
2. Anderson Road Urbanization (Leitrim Road to Smith Gooding Municipal Drain) including Signalization at Leitrim Road (per the City of Ottawa Transportation Master Plan)
3. Signalization of various Intersections, including Leitrim and Ramsayville North and South Intersection Signalization, Anderson Road and Highway 417 Ramps (North and South), as well as intersections along the Leitrim transit priority corridor towards Conroy Road, and others
4. Conroy Bus Lanes (per the City of Ottawa Transportation Master Plan)

*Figure 1: Tewin Transportation Projects*




Environmental protection and sustainability are central to the Strategy. Transportation alternatives were screened through a robust evaluation framework as part of the Class EA process. A combined solution integrating transit, active modes, demand management, and targeted road improvements was selected as the preferred approach, aligning with the One Planet Living framework and maximizing long-term resilience. Mitigation strategies are identified in accordance with MCEA requirements, acknowledging that more detailed project-level studies will follow as development advances.

Public engagement was integral in shaping the Strategy. In addition to agency coordination and targeted outreach, three public meetings were conducted between 2023 and 2025, each informing the evolution of options, evaluation criteria, and the ultimate selection of the preferred mobility network. Feedback from the major landowners - Algonquins of Ontario (AOO), Taggart Group of Companies, and Caivan Communities – as well as City staff, interest holders, and the broader community was integrated meaningfully throughout.

The Tewin Mobility Strategy ultimately provides a bold and implementable plan for a future-ready, transit-supportive, and sustainable community. It charts a clear path for phased implementation through the Planning Act and Class EA processes, while maintaining flexibility for evolving technologies, travel behaviors, and policy directions. More than just a transportation plan, this Strategy reflects a community-building philosophy rooted in innovation and a shared vision for a healthier urban future.

# 2 Tewin Urban Expansion Area

Over the next 25 years, Ottawa is projected to grow by 190,000 households and more than 400,000 new residents. To accommodate this growth, the City's new Official Plan identified the need for 1,281 hectares of additional urban land beyond the current boundary.

Tewin represents the largest area of this urban expansion at 838 gross hectares and is located in Ottawa's southeast sector. The Tewin Study Area is generally bordered by Leitrim Road to the north, Farmers Way to the east, Thunder Road to the south, and Anderson Road and Ramsayville Road to the west. As a newly planned community, it offers a unique opportunity to implement the City's Five Big Moves in a cohesive and intentional way. These cross-cutting policy directions on Growth Management, Mobility, Community and Urban Design, Climate, Energy and Public Health, and Economic Development are fully embedded in Tewin's vision.

Planned as a vibrant, transit-supportive, and complete community, Tewin is envisioned as a model for healthy, sustainable, and respectful growth. Rooted in Algonquin values and guided by the One Planet Living framework, the development emphasizes environmental stewardship, cultural respect, and social equity. Its design incorporates a diverse mix of housing, employment opportunities, and accessible green spaces, creating a complete community where residents can live, work, and play in a well-connected and inclusive environment.

This report outlines the Mobility Strategy for Tewin, which forms the foundation for an integrated and future-ready transportation system. It documents the proposed street hierarchy, transit strategy, active transportation network, parking and loading approach, and road right-of-way cross-sections. It also includes an assessment of regional transportation integration, intersection improvements, and roadway realignments required to support the community. The decision-making process and reporting align with the requirements of the Municipal Class Environmental Assessment (EA) process, including the identification of problems and opportunities, the generation and evaluation of alternative solutions, and the selection of preferred alternatives through meaningful public and interest holder engagement.

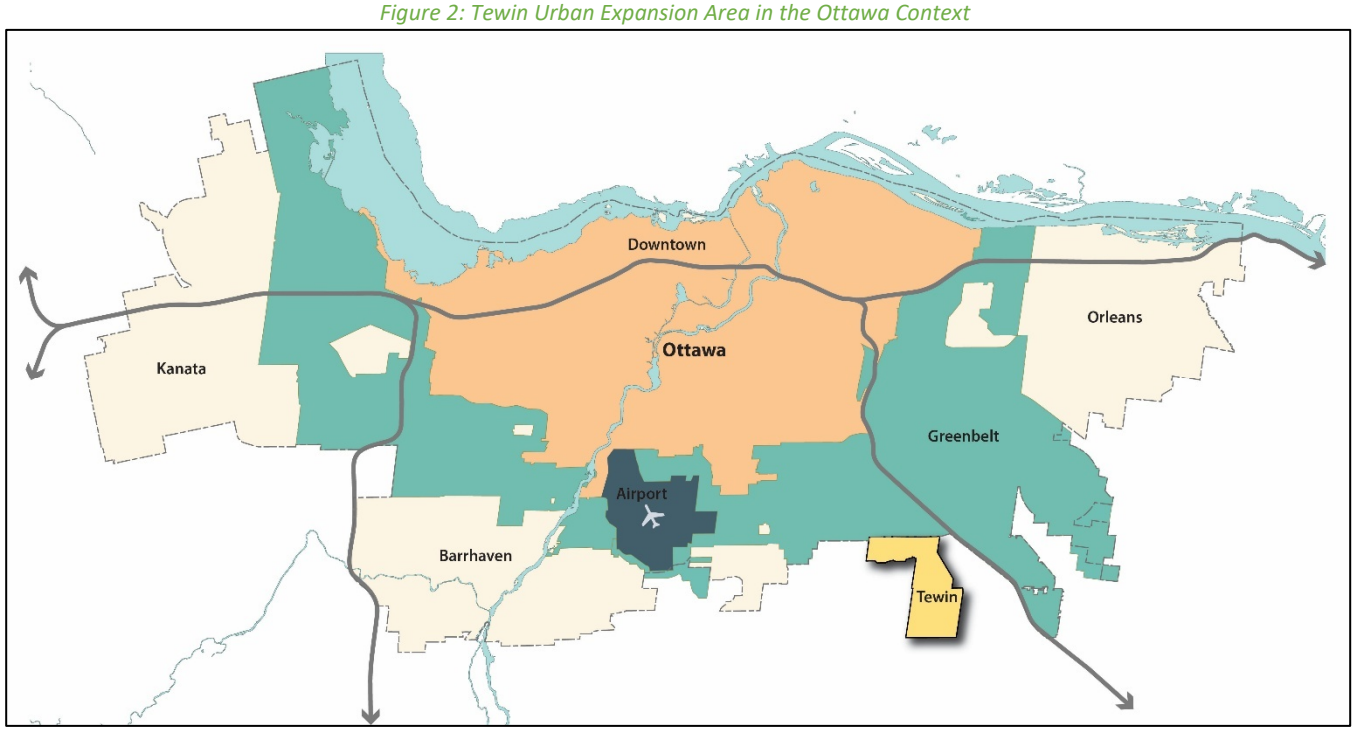
This report is part of a suite of technical studies that support the Tewin Community Design Plan and Secondary Plan. City Staff directed that all technical studies and reports be prepared for the entire Tewin Study Area, as defined by the approximately 838 gross hectare Future Neighbourhoods – Category 2 Overlay on Schedule C17 of Ottawa's Official Plan (2022). Through the Community Design Plan (CDP), a total of 615 net developable hectares have been identified within the Study Area, but only 445 net developable hectares are included in the Secondary Plan area and associated 2046 land supply in accordance with Policy 5.6.2.1.14.

Planning for lands in the Secondary Plan boundary, which is associated with the 2046 land supply, anticipates a population of approximately 35,700 to 40,500 people in 14,100 to 16,600 units. This reflects a higher minimum density than many traditional Ottawa suburbs in order to achieve a transit-supportive, self-sustaining community. Should the full Study Area be developed, Tewin could be home to an additional 15,850 to 18,200 people in 6,400 to 7,500 more units. Details on these boundaries and their methodologies can be further found in Tewin's Community Design Plan.

For the purposes of this Mobility Strategy, the CDP's general projections have been applied to develop and prepare a comprehensive analysis of the full Study Area using a high-density scenario of 58,000 residents. This includes the currently approved 2046 land supply with a high-density scenario of 40,900 residents, and the balance of the Future Neighbourhood lands with a high-density scenario of 17,100 residents.

At the direction of City staff, this Mobility Strategy has been prepared for all lands within the Tewin Study Area, regardless of land ownership. While the major landowners – the Algonquins of Ontario, Taggart Group of Companies, and Caivan – have indicated their intention to develop their land holdings, there are also private properties within the Study Area that may choose to remain in their current state. Recognizing the nature of these properties – many of which are small lots and all of which contain existing rural uses – the CDP recommends that an overlay be applied to these properties, with associated policies that allow for existing uses to continue and expand as permitted by existing zoning, regardless of the new land use designations. What this means for the Mobility Strategy is that the recommended transportation network alignments may shift as part of development applications, depending on development timing and property ownership, while still maintaining the intent and functionality outlined in this document (see Section 12 for additional details).

*Figure 2: Tewin Urban Expansion Area in the Ottawa Context*




# 3 An Opportunity for Change

Communities across Canada and beyond are experiencing a period of rapid evolution, influenced by social, environmental, technological, and cultural shifts. These changes offer new opportunities to rethink how we plan for growth, mobility, and livability. By better understanding how people live, work, and move today and anticipating how these patterns may continue to evolve, planning efforts can be more responsive, inclusive, and future-ready.

Tewin represents a unique opportunity to reflect these emerging trends in a community designed from the ground up. From shifts in planning philosophy and digital innovation to changing generational values and lifestyle preferences, these forces are already shaping expectations around infrastructure, services, and daily travel. The subsections below highlight key themes that can help guide land use and transportation planning in ways that support a more sustainable, connected, and resilient future.

These opportunities for change formed an integral part of the Mobility Strategy process. By identifying transportation and land use trends early on, the project team was able to explore how Tewin could diverge from conventional suburban development models and instead serve as a platform for more innovative and integrated planning. This section outlines the foundational elements needed to support Tewin's transformation into a sustainable 15-minute community that emphasizes multimodal mobility, climate resilience, and inclusive access.

## 3.1 From "Predict and Provide" to "Decide and Provide"

The past is no longer a predictor of the future. Now, more than ever, there is an opportunity to influence the future, which includes considering and providing infrastructure and services to prepare for generations to come. In transportation planning, there is an increasing shift away from the old "Predict and Provide" paradigm which models demand based on past experience and building infrastructure to meet this demand. Instead, there is a shift towards the "Decide and Provide" paradigm. The "Decide and Provide" approach focuses on defining and achieving holistic transportation outcomes rather than simply responding to demands projected using travel and socioeconomic trends of the past. This requires a rebalancing of land use, policy, digital and physical transportation infrastructure, and services to both meet and harness new and emerging access and travel needs.

Tewin's Mobility Strategy has been developed using this "Decide and Provide" approach. Rather than planning reactively around historic auto-centric patterns, the strategy defines a desired future built around sustainability, accessibility, and equity. This has resulted in a transportation plan that prioritizes active transportation and transit, forming the foundation of a multimodal, complete, and climate-conscious community.

The "Decide and Provide" approach also emphasizes several key principles that align with the Tewin vision, including prioritizing people in all aspects of mobility planning, designing transportation systems around the quality of the user experience, supporting personalized and adaptable travel options, optimizing tools and infrastructure for efficiency, and ensuring system-wide reliability. The application of these principles also tie into post-pandemic trends, technological innovation, and generational shifts which are discussed in detail in Sections 3.2 through 3.4.

## 3.2 Legacy of the Pandemic

Changing travel patterns during the pandemic were the result of decreasing spread, new micro-mobility options, and overall changes in peak-hour travel and travel behaviour. There was a shift to more auto trips and active mode trips (walking and cycling) instead of transit. Further, there was a decrease in nonessential travel and residents carefully evaluated their needs to determine if a trip was necessary.

As a result of decreased transit use, changes in travel time and destination routing were made to adjust to the impacts of the pandemic. Peak-hour travel decreased and shifted to other times of the day. Online shopping (including for groceries and other basic needs) increased and uptake in e-commerce use also led to a reduction in trips as other alternatives became available[1]. This saw a reduction in the need for multiple vehicles within one household as trips significantly declined. Combined, these factors shifted the paradigm of how people move from place to place – both locally and regionally. Transportation networks will need to adapt accordingly, rather than base designs on historical precedence, with consideration to the "new normal", as travel behaviour continues to develop post-pandemic.

[1] H. T. K. Le, A. L. Carrel, and H. Shah, *Impacts of online shopping on travel demand: a systematic review,* Transport Reviews (2021), 6 August 2021.

Tewin is well-positioned to be a leader in advancing with these emerging changes. By planning a community that embraces shifting ons, remote work, and increased reliance on active and shared modes from the outset, Tewin demonstrates a forward-thinking response to post-pandemic changes. This proactive approach not only reflects new travel behaviour but also enhances long-term sustainability by reducing emissions, lowering infrastructure demand, and encouraging healthier, low-impact lifestyles.

## 3.3 Technological Advancements

Improvements in communications technologies and processing power have compounded over the last 20 years to deliver a vastly different world. According to Transport Canada, these trends show no sign of slowing down and are likely to accelerate as the public and private sectors adjust to new operational environments[2]. Traffic and transit have been at the forefront of the application of these technological advancements.

Transportation system and transit managers use Intelligent Transportation Systems (ITS) to monitor systems and undertake real-time actions to improve efficiency. The data derived from ITS has been synthesized to create useful information systems for managers and travelers alike. With access and ubiquity of the internet and mobile devices, this information becomes widely available.

Smart infrastructure provides the connection of vehicles (private or transit) and devices to the network. There is a real opportunity for connection and intelligence in the system, facilitating more fine-grained approaches to traffic and transit management benefitting both transit managers and travelers. This smart infrastructure can comprise connected local area networks and wide area networks (LAN/WAN) which augment new high-powered cellular networks utilizing 5G. Importantly, vehicle-to-vehicle and device-to-device connectivity represents new opportunities for collaborative tools to manage travel. The deployment of LiDAR (Light Detection and Ranging) technology on vehicles allows 3-D imaging and distance measurement and takes this model to a further level.

Technological advances are also facilitating vehicle autonomy, demand responsive optional models, and effective vehicle sharing. These changes are enabling new business models and are creating a new mobility business ecosystem, including e-scooters, demand responsive transport (DRT) operators, bike sharing, peer-to-peer car sharing, and autonomous vehicle provisions in private and public transport and deliveries. The increase in modal options available presents both challenges and complexities to the user, and opportunities for true multimodal mobility. For example: there has been an increased interest and deployment of Mobility as a Service (MaaS) demonstrations – providing predominantly mobile phone-based plan-book-pay functionalities across all modes via one interface.

Tewin has the opportunity to be a leader in embracing these emerging technologies to ensure seamless, user-centered mobility. Its planning framework is intentionally designed to support innovation, integrating digital infrastructure and avoiding design decisions that could preclude future adoption. By building a community that is technology-ready, Tewin reinforces its commitment to adaptability, sustainability, and equitable access to multimodal transportation.

The integration of technology and transportation provides the ability to connect people with rapid transit, expand mobility options, and ensure multimodal sustainable transportation is embedded into communities, as highlighted in City of Ottawa Official Plan.

[2] Transport Canada, *Trend in Innovation*, Transport Canada (2021), 30 June 2021.

## 3.4 A New Generation of Mobility Needs

The new generations, including Millennials and Generation Z, place a higher value on their time, preferring work-life balance and flexibility, remote work, hybrid environments and virtual collaboration tools that result in less need to travel[3, 4, 5]. These work-life balance priorities are shifting the needs for physical travel, demonstrating a desire to spend more time on productivity and less time moving from place to place.

This can be partially attributed to the generational upbringings in the digital age, contributing to comfort with and preference for using technology for communication and socialization. Further accelerated by the COVID-19 pandemic, online interactions have become a way of life. There are expectations for workplaces to be equipped with the necessary technologies to facilitate remote and hybrid work environments which enhances job satisfaction. Virtual socialization has also allowed for personal and professional relationships to exist and be fostered regardless of the location.

The preference for use of technology and the prioritization of work-life balance translates to a higher regard for localism, a social and economic philosophy wherein local communities and economies are considered with greater importance, encouraging the support of small businesses, environmental sustainability, inclusivity, and the increased integration of technology in daily life[3].

Tewin recognizes the importance of localism and allowing its community to adapt and thrive as technologies and priorities shift. This includes evaluating the current generational needs as well as anticipating needs of the future, to ensure the community remains relevant, resilient, and forward-thinking for decades to come.

The trends described in this section form the broader context for Tewin's growth and its integration with the City of Ottawa as a whole. By embedding these behavioural, generational, and technological shifts into its design, Tewin is not only responding to present needs but also positioning itself as a model for sustainable, inclusive, and future-ready urban development.

[3] S. Bambino, *This Generation Values Their Time The Most, According to Survey*, MoneyDigest, May 19, 2024.
[4] Matsh, *Remote Work Preferences: Statistics on Employee Choices in 2024*, 26 December 2024.
[5] E. Elldér, *Telework and daily travel: New evidence from Sweden*, Journal of Transport Geography (2020), 20 June 2020.

# 4 Citywide Transportation Planning Context

The development of Tewin is guided by local design principles and by the broader citywide transportation and land use frameworks established by the City of Ottawa. This section outlines the key policy documents and strategic initiatives shaping how mobility is planned, delivered, and integrated across the City. These include the City's Official Plan, suburban development strategies such as the Building Better and Smarter Suburbs (BBSS) initiative, and the latest updates to the Transportation Master Plan (TMP). Together, these documents provide the planning foundation for achieving sustainable, connected, and transit-oriented communities.

## 4.1 City of Ottawa Official Plan

The City of Ottawa Official Plan (OP) serves as the long-term vision for managing growth and development across the City through 2046. As Ottawa's population is expected to increase by nearly 40%, reaching approximately 1.4 million people, the OP focuses on accommodating this growth in a sustainable and efficient manner. The plan emphasizes intensification, particularly in built-up areas, while also allowing for strategic expansions into new communities. A key principle guiding Ottawa's growth is the complete neighbourhood concept, where residents can access essential services, employment, and recreation within a short walk, bike ride, or transit trip (see Figure 2)[6, 7]. The OP also prioritizes climate resilience, affordable housing, and sustainable transportation networks, ensuring the City evolves into a more connected and livable environment.

*Figure 3: Design Focus of Complete Neighbourhoods[7]*


The OP has designated new urban expansion areas, balancing urban intensification with suburban and rural development, with Tewin being one of the focus areas. The OP identifies Tewin as an area that will integrate climate-conscious design, transit-oriented planning, and complete communities to accommodate future housing and employment needs.

The OP's urban expansion policies highlight the importance of connectivity and accessibility in new communities. As a designated urban expansion area, Tewin is expected to be fully integrated into Ottawa's broader mobility system, ensuring efficient transportation options for future residents. The success of Tewin will be rooted by establishing strong connections to existing urban centres, reducing reliance on private vehicles, and supporting multi-modal travel. The Mobility Strategy for Tewin reflects the OP's directive to create well-linked, sustainable neighbourhoods that contribute to a cohesive city-wide transportation network.

Public transit expansion is a major pillar of Ottawa's Official Plan, reinforcing transit-oriented development (TOD) as a priority for new communities. Tewin's design aligns with this vision by ensuring direct access to public transit

[6] City of Ottawa, *15-minute neighbourhoods*, Engage Ottawa (2021), 27 September 2021.
[7] City of Ottawa, *Section 2. Strategic Directions*, City of Ottawa

infrastructure, integrating mobility hubs, and designing streets that facilitate seamless connections to transit corridors. This approach will promote a reduction to car dependency and encourage transit as the primary mode of transportation for residents.

Active transportation and complete streets are also central to the OP's mobility framework, with an emphasis on the need for safe, accessible, and interconnected pedestrian and cycling networks. Tewin's mobility strategy includes high-quality walking and cycling infrastructure, ensuring that residents have convenient access to schools, commercial areas, parks, open spaces, and transit stations.

Sustainability and climate resiliency shape the way transportation networks are planned and developed. To align with the City's climate action goals, Tewin's mobility system encourages low-emission transportation options. Tewin represents an opportunity to set a new standard for sustainable urban expansion, where mobility planning prioritizes environmental responsibility and long-term resiliency.

By aligning with the City of Ottawa's Official Plan, Tewin's mobility strategy ensures that the new community is well-connected, transit-oriented, and climate-conscious. A thoughtful and strategic transportation network is embedded into the Tewin Intent and is essential in shaping Tewin into a complete, livable, and future-ready community that integrates seamlessly into Ottawa's broader urban fabric.

### 4.1.1 City of Ottawa Official Plan - Five Big Moves

Ottawa's Five Big Moves set a strategic direction for growth, sustainability, and livability in the Official Plan to prepare for the future growth of the City. The new Official Plan encourages sustainable transportation, high-quality urban design, climate resilience, and economic development. Below are the five policy pillars ("Big Moves") set forth to make Ottawa more livable and sustainable:

- Growth Management: Create complete communities and a variety of affordable housing options.
- Mobility: Shift toward a sustainable transportation majority for modal choice by 2046 by increased pedestrian, cycling, public transit, and carpooling traffic.
- Urban and Community Design: Design for communities and culture through improvement of current and future urban design.
- Climate, Energy and Public Health: Include health, climate action, and sustainable energy during development and planning framework.
- Economic Development: Factor in economic growth during development and planning framework.

The *Growth Management* strategy focuses on intensification, as well as cost-efficient urban expansion that supports the City's climate goals. Tewin contributes to this goal by promoting compact development organized around a central Mobility Spine, which supports cost-effective infrastructure delivery and minimizes long-term operational impacts.

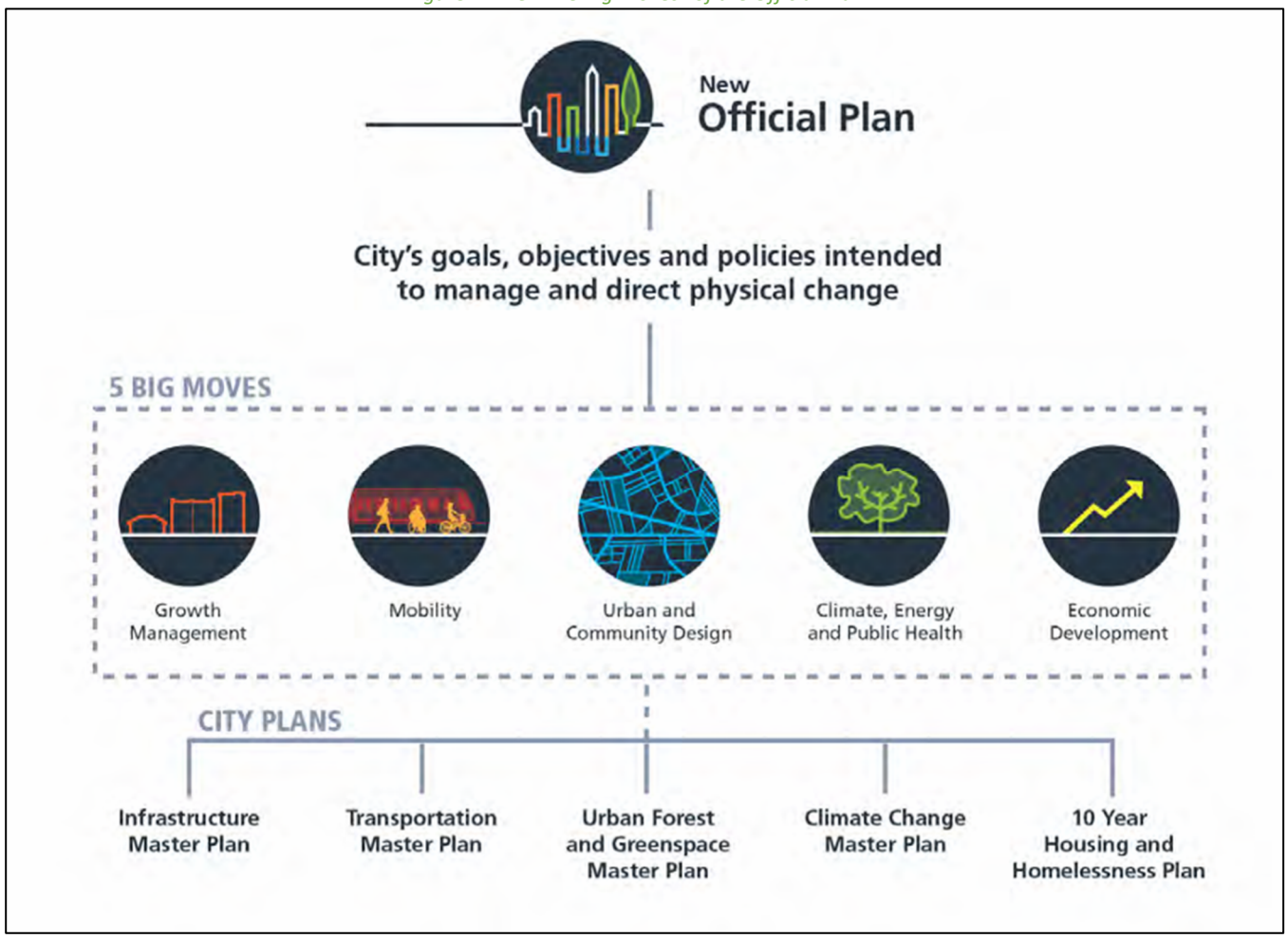
The *Mobility* policies aim for most trips to be made through sustainable transportation, including walking, cycling, transit, or carpooling. Land use and transit planning is better aligned, with transit-oriented development reducing car dependency. The plan calls for improved transit ridership, multi-modal connections, new funding models, and strategic use of emerging technologies like electric and automated vehicles. The City is also exploring options in improving the regional transportation connections. Tewin supports these policies by applying a "Decide and Provide" framework that emphasizes transit-first planning, integrated active transportation networks, and future-ready technologies across a multimodal mobility system.

*Urban and Community Design* policies emphasize Ottawa's identity as a capital city, enhancing public spaces, preserving skylines and heritage, and tailoring planning approaches for different urban and rural contexts. The City will create vibrant, pedestrian-friendly streets, integrate cultural and artistic elements, and focus on design priority areas to ensure visually cohesive, high-impact city-building projects. Tewin reflects these values through the incorporation of Algonquin cultural elements, human-scaled street design, and public realm planning that fosters a strong sense of place and community identity.

The *Climate, Energy, and Public Health* strategy embeds sustainability into urban planning, prioritizing complete street neighbourhoods where residents can access essentials within a short walk or bike ride. Green infrastructure, urban forests, and climate-resilient development will help mitigate heat islands, reduce flood risks, and enhance disaster preparedness. Policies will promote energy-efficient buildings and local renewable energy generation while ensuring public infrastructure is designed for long-term resilience. Tewin advances these objectives by embedding sustainability into its street network and mobility infrastructure, encouraging low-carbon travel choices and designing with climate resilience at both the neighbourhood and corridor scale.

*Economic Development* policies focus on positioning Ottawa as an innovation hub. Employment land strategies will differentiate business districts into knowledge-based hubs, industrial zones, and mixed-use areas. The plan supports business incubation, leveraging city-building projects for economic growth, and strengthening Macdonald-Cartier International Airport as a regional economic driver. Rural economic development will emphasize agricultural viability, urban food production, and optimizing Greenbelt management. Tewin contributes to economic development by supporting employment along the Mobility Spine and integrating smart mobility infrastructure that enhances regional connectivity and economic diversification. Tewin supports Ottawa's broader economic development focus with its strategic location in close proximity to Highway 417 and the two growing employment hubs surrounding the Airport and Boundary Road.

*Figure 4: The "Five Big Moves" of the Official Plan*[8]




## 4.2 Building Better and Smarter Suburbs: Strategic Directions and Action Plan

The Building Better and Smarter Suburbs (BBSS) study provided a high-level direction to the City of Ottawa's work on suburban developments. In accordance with the BBSS, the City envisions its suburbs to be complete, livable, safe, and sustainable communities by incorporating successful urban planning principles such as Vision Zero objectives. The BBSS established Ottawa's suburban developments to be land and resource-efficient by including mixed-use developments and diverse housing options along with high-quality public spaces and infrastructure. The key transportation-related principles include the following directions:

- **Efficient Land Use:** Encouraging higher density, mixed-use developments, and multi-purpose spaces to optimize land use and community building.
- **Complete Street Design:** Designing suburban streets to be able to accommodate active and public transportation and reduce dependency on private vehicles.
- **Financial Sustainability:** Ensuring that new developments are cost-effective for long-term maintenance.

[8] City of Ottawa, *New Official Plan Volume 1*, City of Ottawa (2020), 20 November 2020.

These principles align with the Tewin Intent to design and build a transit-oriented and environmentally sustainable community. Additionally, BBSS outlines strategic recommendations to improve suburban developments in Ottawa, which are beneficial to Tewin. These recommendations include:

- **Street Network and Land Use:** Encouraging a connected street grid, promoting mixed-use areas, and ensuring proximity to transit, parks, and schools to enhance walkability.
- **Parks and Public Realms:** Integrating parks and natural landscapes into neighbourhood fabrics to improve accessibility to high-quality public recreational spaces.
- **Schools and Institutions:** Planning schools as community hubs with pedestrian-friendly designs and optimized distance from residential neighbourhoods.

These recommendations provide a framework for Tewin's overall build-out and ensures alignment with Ottawa's vision for efficient, sustainable, and vibrant suburban growth.

## 4.3 Transportation Master Plan 2025 Update

The City of Ottawa's updated Transportation Master Plan (TMP approved in 2025) reflects a significant evolution on how the City plans for long-term mobility. The TMP was prepared in support of the Official Plan and identifies recommended transit and road infrastructure to support growth areas, including Tewin. Importantly, the TMP has been developed to fulfill Phases 1 and 2 of the Municipal Class Environmental Assessment (MCEA) process, at a city-wide scale. In accordance with the MCEA framework, the TMP identifies transportation problems and opportunities (Phase 1), and evaluates a range of alternative solutions (Phase 2) to address them. The process includes public consultation, problem definition, and a thorough assessment of network-wide improvements needed to meet future travel demand. This enables TMP-identified projects to proceed directly to Phases 3 and 4 of the Class EA process, subject to project-specific refinements and additional public engagement, where required.

Aligned with the policies of the Official Plan, the TMP emphasizes a shift away from traditional auto-oriented infrastructure planning toward a transportation system that supports sustainability, equity, and community well-being. A core principle of the TMP is to prioritize moving more people, not more cars, by investing in transit, active transportation, and complete streets that create more connected, livable communities.

As part of this shift, the Road Network Development Report, a supporting document of the TMP, applies a "Transit First" approach. This approach identifies transit improvements needed to meet future travel demand through 2046 before evaluating where additional road capacity may be required. Only the residual auto demand (i.e., the demand not expected to use transit) is used to determine where road network improvements may still be necessary, ensuring road expansion is only considered when justified.

To determine which projects are included in the City's long-range road network, each candidate project was evaluated against a clear set of screening criteria. Projects were only carried forward if they met at least one of the following core mobility needs:

- Addressing a screenline capacity deficiency or significant local capacity deficiency; or
- Providing transportation access to support new development.

This refined approach supports a more strategic, sustainable, and policy-aligned vision for Ottawa's future transportation system. The details on the proposed network changes under the TMP are discussed in Sections 8.1 and 9.1.

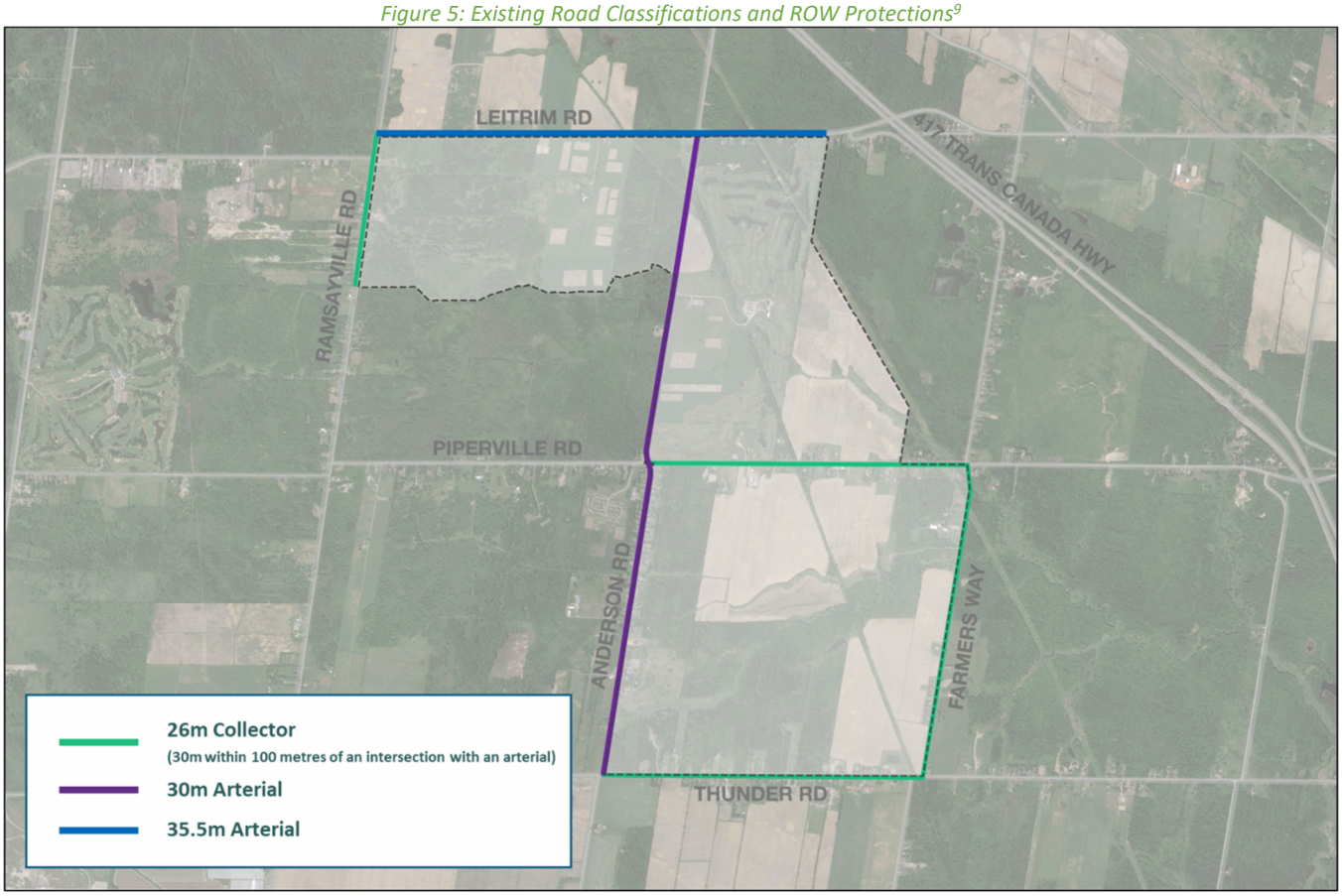
# 5 Existing Conditions Summary

The Tewin Mobility Existing Conditions assessment was prepared in concert with a suite of other technical studies as part of Phase 1 of the Tewin study process, in accordance with the requirements of the Municipal Class Environmental Assessment (MCEA). Together, the existing conditions assessments establish a comprehensive understanding of the physical, social, and ecological characteristics of the Study Area. The Mobility Strategy Existing Conditions Report (Appendix A) forms the analytical foundation for identifying transportation problems and opportunities and directly supports the development of both local and regional mobility strategies. This work also informs the evaluation of alternative solutions in subsequent EA phases, ensuring that transportation planning decisions are grounded in current conditions and system constraints.

The assessment was completed alongside other technical reports for land use, servicing, natural heritage, and environmental systems. Where appropriate, these reports also identify preliminary opportunities to help guide the next phase of the master planning process. The Tewin Mobility Existing Conditions Report and other background material are provided in Appendix A.

Figure 5Existing classifications and protected ROWs of the roads mentioned above are illustrated in Figure 5. Tewin is located in close proximity to two major interchanges with Highway 417: one at Anderson Road, and one at Boundary Road.

*Figure 5: Existing Road Classifications and ROW Protections*[9]




[9] As per City of Ottawa Official Plan (2021), Volume 1, Table 1 – Right of Way Protection.

To describe the transportation corridors to and from the new development area, existing transportation infrastructure including roadways, transit, and active transportation networks, are discussed in Sections 5.1 through 5.3 below.

## 5.1 Auto Network

Based on the 2019 origin-destination analysis conducted for southeast Ottawa, Leitrim Road was found to primarily serve east-west trips and connect to communities west of Tewin, including Findlay Creek and Barrhaven. A significant portion of northbound trips travelling from the rural east and southeast regions uses Anderson Road to reach inner suburbs. The southbound trips were found to take the same route with Origin-Destination (OD) pairs reversed. Furthermore, Highway 417 is mainly used to serve trips travelling to and from downtown Ottawa in the north-south direction, as well as regional trips outside the Ottawa region. Additional details, including existing levels of service, are provided in Appendix A.

## 5.2 Transit Network

Bus Route #222 currently operates in the Tewin area that provides connection from the Vars community to O-Train Line 1 at Blair station. Additionally, Leitrim station on O-Train Line 2 is located approximately 7 km west of Tewin, with parking provided on-site to accommodate commuters. Although existing transit service does provide essential connections, additional services and integration are anticipated to be required in order to support transit accessibility. Given the vision for a complete community, transit integration will be essential for ensuring sustainable mobility.

## 5.3 Active Transportation Network

There is currently no dedicated active transportation infrastructure in Tewin, as it is a generally undeveloped area. The closest accesses to a broader active transportation network are located north of Tewin, in the Hunt Club neighbourhood or in the NCC Greenbelt pathway network, which both connect to Ottawa's urban cycling network. Existing travel patterns suggest that active transportation is most effective in areas with direct connections to commercial areas, schools, and transit services. The current lack of infrastructure limits mobility options, and planning efforts will need to consider how pedestrians and cyclists will be accommodated as the community develops.

# 6 Developing the Tewin Land Use Plan

The development of Tewin's land use plan is rooted in a new model of community-building, one that integrates transportation, sustainability, Algonquin knowledge, and inclusive design from the outset. This section outlines how Tewin's land use framework has been developed in parallel with mobility planning, ensuring that where and how people live, work, and move is fully coordinated. Through principles guided by the Algonquins of Ontario (AOO), the One Planet Living (OPL) framework, and proactive engagement with the community, Tewin establishes a clear foundation for a compact, connected, and complete neighbourhood that redefines how suburban growth can unfold. In what follows, Sections 6.1 through 6.4 summarizes the high-level principles that shaped the development of the Tewin land use plan, followed by the process of developing the land use plan outlined in Sections 6.5 and 6.6 in which the principles were applied. Section 6.7 describes the Mobility Spine as a major outcome of the process, which serves as the foundation of Tewin's internal mobility strategy detailed in Section 7.

## 6.1 Integrated Land Use and Mobility Framework

Land use planning fundamentally shapes how people move through a community. When land use and transportation planning are not coordinated, it often leads to long-term challenges that could have been avoided early on. Historically, the prevailing approach to community planning across North America and much of Canada has prioritized car-oriented development, resulting in widespread patterns of auto-centric infrastructure, fragmented land uses, and travel behaviors rooted in vehicle dependence. These legacy practices have proven difficult to reverse, as retrofitting communities to support more sustainable, multi-modal transportation is often costly, complex, and constrained by outdated planning frameworks.

Tewin represents a deliberate shift away from the status quo described above. From the outset, it has been planned with a fully integrated approach, embedding sustainable, multi-modal transportation into the structure of the community. Transportation was a key consideration in evaluating the distribution of land uses, with specific criteria focused on creating a network that enables efficient and accessible transit service, supports complete streets, and fosters safe, connected infrastructure for walking and cycling. In Tewin, multi-modal mobility is not an afterthought, it is a foundational principle. The desired outcome is a community where getting from point A to point B is efficient, and also a positive experience that enhances the overall quality of life.

To support this integration, the development of the Mobility Framework applied insights from TIMM, or the Tewin Integrated Mobility Model (see Appendix D). TIMM provided a strategic framework for understanding the conditions that influence the competitiveness of various travel modes in real-world community contexts. The research helped identify the infrastructure, service, land use, technology, and policy factors that make sustainable mobility options attractive and viable. These findings were used to ensure that land use decisions within the Community Design Plan and Secondary Plan do not inadvertently preclude the implementation of best practices in multi-modal transportation. By embedding these insights into the land use framework, Tewin is positioned to support transit, walking, and cycling as convenient and desirable options from the outset, encouraging sustainable travel behaviours and enabling a complete, people-oriented community to strengthen over time.

## 6.2 Algonquin Guiding Principles

The Algonquin people, or Omàmiwininiwak, have lived in the Ottawa region for millennia, guided by a deep respect for the land, collective responsibility, and environmental stewardship. Algonquin traditional knowledge, rooted in sustainable living and harmonious movement through the natural world, offers meaningful guidance for shaping Tewin's Mobility Strategy.

Incorporating these principles requires a holistic, community-focused approach that prioritizes sustainability, connectivity, respect for natural systems, and close coordination between land use and transportation planning. Active and public transportation options are central to reducing environmental impact, while land uses support a complete, future-ready community. Transportation planning also integrated these values into environmental assessment criteria to avoid or mitigate ecological impacts from the community's transportation infrastructure.

The active and public transportation system, connected trail network, and integrated green spaces encourage more local, community-based travel which reinforce a lifestyle that is centred around sustainability, community, and connection with land. By embedding and honouring Algonquin knowledge in the design and implementation process, Tewin strives to serve as a model for inclusive mobility planning and sustainable development.

## 6.3 One Planet Living Framework

The One Planet Living (OPL) framework provides a foundation for Tewin's development, supporting a holistic and actionable vision for a complete community. Some of the OPL principles' application in Tewin include the following core development objectives:

- Embedding Algonquin wisdom, principles, and place-keeping throughout the community;
- Setting a new benchmark for sustainable design aligned with the Five Big Moves of the Ottawa Official Plan;
- Prioritizing mobility through a wide range of active and shared transportation options, making private vehicle use a choice, not a necessity;
- Delivering a balanced mix of housing, jobs, services, and community amenities to support daily life locally;
- Protecting, integrating, and enhancing natural and agricultural lands; and
- Ensuring affordability, accessibility, and a welcoming environment for all.

## 6.4 Tewin Intent

Tewin is envisioned as a generational opportunity to rethink how communities are planned, built, and experienced. Rooted in the values and knowledge of the Algonquin people and supported by the One Planet Living framework, Tewin will be a model for inclusive, sustainable, and future-ready development. The preceding sections highlight integrated land use and mobility planning, Algonquin guiding principles, and One Planet Living framework, and establish a clear foundation for a new approach to community-building in Ottawa. The Tewin Intent serves to carry these principles forward into the implementation stage.

At the heart of the Tewin Intent is a commitment to doing things differently and planning a community that prioritizes people, the planet, and future generations. The Tewin Partners (Taggart Group, Algonquins of Ontario (AOO) and Caivan) alongside the City of Ottawa, have all committed to advancing Tewin with a shared vision: to build a compact, connected, and complete 15-minute community where sustainability, resilience, and equity are not just aspirations, but core design principles.

The Tewin Intent is structured around several interrelated strategic directions, including:

- Prioritizing mobility and connectivity through a proactive strategy that enables walking, cycling, transit, and emerging modes such as e-travel and shared mobility. Tewin will be designed so that personal vehicle use is optional, not required.
- Embracing bold and alternative approaches to planning and engineering. Tewin will explore non-traditional standards where needed, whether through green infrastructure, innovative stormwater

systems, or context-sensitive road designs, to achieve more sustainable, people-first outcomes, and minimizing redundancies.

- Committing to efficient and integrated infrastructure delivery by aligning land use with smart infrastructure investments that reduce long-term costs while supporting growth, resilience, and affordability.

These project intents are supported by key areas of focus, including a flexible planning framework, a systems-based approach to environmental protection, an integrated mobility strategy, and an innovative parks and open space network. Through collaborative planning and ongoing engagement with varying key interest holders, Tewin will set a new benchmark for how communities in Canada can grow respectfully, responsibly, and regeneratively.

Tewin has the opportunity to represent a community that honours Algonquin peoples and values, reflect shared civic goals, and embrace the future of sustainable living, demonstrating what is possible when planning is grounded in principles, not precedent.

## 6.5 Coordinated Municipal Class Environmental Assessment Process

Given the ambition and scale of Tewin, the design and planning process requires robust and ongoing consultation with both internal and external interest holders. A coordinated Planning Act and Municipal Class Environmental Assessment (EA) process has been designed to consolidate technical and community planning elements. This coordinated approach supports more effective engagement and decision-making by aligning planning milestones and ensuring all critical partners, consultants, and interest holders are brought together to identify opportunities and address challenges throughout the development process.

The process includes a coordinated public consultation strategy and a technical study review timeline that satisfies the requirements of the concurrent Planning Act and Municipal Class EA processes. Municipal Class EA consultation points have been incorporated and synchronized with the broader community planning process, including the refinement of community objectives, the development of the urban framework, the selection of preferred plans, and the preparation of the draft Secondary Plan. Additional public and targeted consultations will be undertaken to complement and support transparent, inclusive engagement.

## 6.6 Tewin Public Meeting #1

As part of the coordinated Planning Act and Municipal Class EA process, a first public meeting was held on October 26, 2023, marked a key milestone in introducing the project to the broader community and setting the early stage for transparent and coordinated land use planning.

Public Meeting #1 provided an overview of the Tewin vision, draft goals and objectives, and a summary of existing conditions and preliminary opportunities. It served as the official launch of the EA process, confirming that environmental considerations are being integrated from the outset. The format of the session enabled residents, interest holders, and agencies to provide input on key themes, including land use, natural heritage, infrastructure, and mobility.

The meeting demonstrated the project's commitment to collaborative decision-making, with participation from the City of Ottawa, the Tewin Project team, and various community partners. Feedback from this session informed the evaluation of options and the development of the Community Design Plan and Secondary Plan.

The transportation related public consultation material can be found in Appendix B. Public Meeting #1 affirmed that the EA process and outcomes are being used as a tool to shape a community vision that is responsive, inclusive, and grounded in both technical and cultural knowledge.

## 6.7 Mobility Spine Vision

Tewin introduces a new vision for suburban mobility that prioritizes people. At the heart of this approach is a central mobility spine, first introduced at Public Meeting #1, which forms the backbone of Tewin's transportation and land use network. This spine is more than a road – it is a structuring element for daily life, where transit, walking, cycling, and higher-density development converge to support a compact, complete, and sustainable community.

Unlike conventional suburban development, where commercial uses are often spread along arterial intersections and designed primarily for drivers, Tewin organizes key destinations such as schools, parks, mixed-use typologies that enable local businesses, and community services along this centralized corridor. This creates a vibrant, walkable core that draws people inward and supports day-to-day life without requiring car travel.

Further, Tewin's approach is guided by a "complete networks" philosophy. Rather than attempting to serve all modes within a single right-of-way, often resulting in trade-offs, Tewin's transportation system is layered and context sensitive. Certain corridors are designed to prioritize pedestrians and cyclists through design features that calm traffic, enhance comfort, and reduce potential conflicts with vehicles. Transit will be emphasized along the central mobility spine, ensuring that all modes have space to function effectively while working together to offer a full range of safe and efficient travel options.

Tewin's vision also includes a complementary trail network woven through green spaces and natural areas, as highlighted during Public Meeting #1 under the Algonquin cultural opportunities and open space system. These recreational connections will complement the broader mobility network, offering residents year-round access to nature and reinforcing the community's commitment to health, inclusivity, and environmental stewardship.

Building on feedback gathered during Public Meeting #1 and early technical studies, several key opportunities have been identified for shaping the Tewin mobility network:

- Create a central spine for transit and higher-density development, bringing key destinations closer together and helping establish a strong, walkable core.
- Develop a high-quality mobility network focused on walking, cycling, and transit, to promote sustainable travel and give residents real choice in how they move.
- Explore the use of technology to create a smarter, more efficient mobility network, including potential applications such as real-time travel information or Mobility-as-a-Service (MaaS) platforms in the future.
- Build from existing conditions and bring conceptual street corridors inward, minimizing impacts on existing properties and sensitive natural areas.
- Design local connections that complement the mobility spine, supporting all users with comfortable, safe routes that align with complete network principles.

These opportunities reinforce Tewin's mobility strategy as a foundation for broader community goals, delivering an inclusive, resilient, and future-ready neighbourhood built around sustainable movement and quality of life.

# 7 Developing the Tewin Mobility Strategy

The process of developing Tewin's Mobility Strategy reflects a complete, layered approach to transportation planning, one that is rooted in sustainability, multi-modal connectivity, and integration with land use. Building on public and technical input, this section presents the internal and regional mobility framework for Tewin, including alternative solutions explored through the Environmental Assessment process, evaluation criteria, and preferred network configurations. From the structure of the Mobility Spine to the supporting road network, active transportation systems, and transit priorities, the strategy supports a compact, complete community where people of all ages and abilities can move safely, comfortably, and efficiently by foot, bike, transit, or car.

## 7.1 Tewin Public Meeting #2

Public Meeting #2 was held on June 19, 2024 and focused on advancing Tewin's transportation planning through the Class EA process. As part of this step, the project team presented a series of alternative solutions for both local and regional transportation networks. These included different internal network layouts, street configurations, transit corridor options, and spine alignment concepts, along with strategies for regional transit and auto connectivity.

A set of evaluation criteria, grounded in Tewin's guiding principles and policy frameworks, was also introduced to assess each solution's performance in terms of mobility, accessibility, sustainability, and integration with land use. Several alignment options for the central community spine were highlighted as part of this process.

Feedback from Public Meeting #2 helped refine the preferred internal network structure and shape the direction for regional connections. A summary of public input received is included in Appendix B. The following sections summarize the alternative solutions explored, the evaluation framework, and the resulting plans for transit, vehicle, pedestrian, and cycling mobility within Tewin.

*Figure 6: Tewin Public Meeting #2*

## 7.2 Exploring Alternative Internal Mobility Solutions

To address the expected travel demand from growth in Tewin and surrounding areas, a range of alternative solutions for both local and regional transportation were considered. The alternatives reflect different approaches

to improving capacity and supporting a sustainable mobility network, and were organized into the following five solution types:

- **Solution 1: Do Nothing** - Rely exclusively on the existing road and transit infrastructure with no additional network enhancements.
- **Solution 2: Technology and Policy Tools** - Use measures such as travel demand management, telecommuting, and emerging mobility technologies to manage trips and reduce reliance on private automobiles.
- **Solution 3: Active Transportation Focus** - Expand walking and cycling infrastructure as the primary mode for local trips and regional access.
- **Solution 4: Transit-Focused Infrastructure** - Build out transit-supportive corridors and services to meet mobility needs primarily through public transit.
- **Solution 5: Auto Infrastructure Expansion** - Expand roadway infrastructure to accommodate automobiles and goods movement.

These alternatives were assessed separately for both local and regional contexts. The “Do Nothing” scenario would fall short of meeting travel demand and supporting Tewin’s vision as a sustainable, mixed-use, and transit-oriented community. It was therefore not carried forward as a standalone solution for either local or regional travel. Instead, a combined solution, integrating elements of Solutions 2 through 5, was found to perform best across evaluation themes such as alignment with One Planet Living framework, transportation capacity, sustainability, and land use integration. This combined solution is being carried forward for further refinement and assessment.

To inform the selection of a preferred direction, the project team drew on insights from the Tewin Integrated Mobility Model (TIMM), a research-based framework introduced in Section 6.1. This work identified the key factors influencing modal competitiveness, or the real-world attractiveness of different travel modes based on infrastructure, technology, service, land use, and policy conditions. Supported by the TIMM analysis, the Official Plan, and the Transportation Master Plan, no single solution is sufficient to meet Tewin’s long-term goals. Instead, a combined solution, integrating elements of Solutions 2 through 5, offers the strongest foundation, supporting transportation capacity, environmental performance, and alignment with OPL framework and Official Plan objectives.

Importantly, the combined solution is more than the sum of its parts, it establishes a reinforcing feedback loop that encourages sustainable travel behaviour over time. For example:

- Investments in active transportation infrastructure improve access to transit, leading to greater transit ridership;
- Higher transit use supports the viability of mobility-supportive technologies, such as real-time trip planning and Mobility-as-a-Service platforms;
- As walking and transit become more common, local businesses and services are more likely to thrive, creating destinations within walking distance; and
- In turn, the community becomes more vibrant and compact, encouraging further walking, cycling, and reduced auto dependence.

This combined solution is being carried forward for further refinement and assessment. Future work will further define the specific alignments, right-of-way requirements, and multi-modal cross-section designs necessary to support a complete, adaptable, and future-ready mobility system.

## 7.3 Evaluation Criteria

A consistent evaluation framework was developed to assess both the alternative solutions presented in Section 7.2 and the detailed alternative designs that follow in later sections. This framework enabled a transparent and comparative analysis of how each option performs relative to Tewin's mobility objectives, City of Ottawa policy direction, and environmental and community considerations.

The process involved a rigorous qualitative assessment conducted by technical experts and presented for City, interest holder, and public feedback. Each alternative, whether a network-wide solution or a corridor-specific design, was evaluated against a set of defined criteria. Alternatives were ranked from least to most desirable based on their relative benefits and potential impacts.

The evaluation criteria and the ranking methodology are illustrated in Figure 7 and Figure 8 respectively.

*Figure 7: Alternative Design Evaluation Criteria*

| | EVALUATION CRITERIA |
|---|---|
| **DEVELOPMENT & LAND USE** | 1. Planned and designed to support a sustainable future in accordance with AOO values and Design Guidelines as well as OPL Principles.<br>2. Creates vibrant mixed-use centres that are a focus for community activity<br>3. Accommodates a mix of land uses that support convenient access to a range of services and amenities<br>4. Integrates with existing homes and businesses |
| **TRANSPORTATION & MOBILITY** | 5. Creates a transportation network that facilitates efficient transit operation and coverage<br>6. Supports complete streets and active mobility, including pedestrian and cycling connectivity |
| **NATURAL SYSTEM, PARKS, RECREATION & OPEN SPACES** | 7. Centres the Tewin community on natural systems including watercourses, wetlands, trees and plants<br>8. Supports a connected network of Parks and natural areas that provide access for residents, protects wildlife habitat and connects future Algonquin Natural Land Trust east of the site<br>9. Allows for watercourse naturalization to support a resilient natural system<br>10. Delivers Parks, Schools, and Community Facilities that are highly usable, accessible and activated<br>11. Enhances the natural environment end ecological systems for future generations |
| **SERVICING** | 12. Optimizes stormwater management techniques that contribute to the character of the Tewin Community<br>13. Supports the efficient delivery of servicing |
| **PHASING & IMPLEMENTATION** | 14. Reduces capital costs<br>15. Reduces operating costs<br>16. Optimizes the phased delivery of infrastructure and amenities |

*Figure 8: Options Ranking Process*

| Ranking | General Interpretation | Positive Benefits | Negative Impacts | Description |
|---|---|---|---|---|
|  | Most Desirable  Least Desirable | Greatest | Negligible/Low | The strategy provides the most benefit(s) with the fewest or no negative impacts. |
|  | | Good | Slight | The strategy is generally positive, though there are one or more aspects that are not desirable and/or require mitigation. |
|  | | Reasonable | Some | The strategy is net-neutral, with positive benefits balanced by negative drawbacks. |
|  | | Limited | Significant | The strategy is net-negative, with drawbacks outweighing benefits. There may be a single critical failure despite otherwise positive or acceptable aspects. |

## 7.4 Mobility Spine Alignment Assessment and Preferred Option

The Mobility Spine is envisioned as the primary organizing element of Tewin's internal transportation network, a central corridor that connects neighbourhoods, concentrates higher-density and mixed-use development, and supports multimodal travel, including transit, walking, cycling, and vehicles. It will be constructed in phase and expand in segments as the community expands.

Four (4) Community Spine alignment options were developed and presented during Public Meeting #2. These options represent different approaches to structuring internal circulation and integrating the spine with the overall community layout:

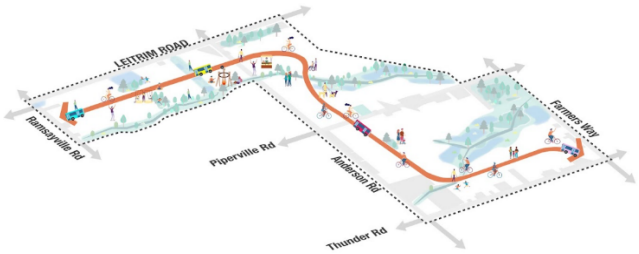
- **Option 1: Existing Road Network**
  Utilizes the existing external arterials such as Anderson, Leitrim, Piperville, and Thunder Roads as the spine. While this option minimizes new infrastructure needs, it limits walkability and internal connectivity and provides weak support for transit-oriented development.
- **Option 2: Singular Spine**
  Introduces a new continuous corridor running through the heart of Tewin. This approach creates a strong central structure, promotes transit-oriented design, and maximizes accessibility without requiring significant disruption to existing properties.
- **Option 3: Medium Loop**
  Builds on the singular spine concept with a looped extension serving the eastern portion of the site. This improves local access in some areas but introduces added complexity and potential conflicts with natural features.
- **Option 4: Big Loop**
  Expands the loop further southeast, offering maximum development frontage and circulation coverage. However, this option has greater potential for environmental impacts and could affect more existing landowners.

Each option was evaluated using the criteria introduced in Section 7.3. The Figure 9 and Table 1 below illustrate the alignment concepts and their relative performance across the evaluation criteria. The detailed analysis and justifications for each option's ratings are included in Appendix C.

*Figure 9: Mobility Spine Alignment Options*

**Option 1**


**Option 2**




**Option 3**


**Option 4**

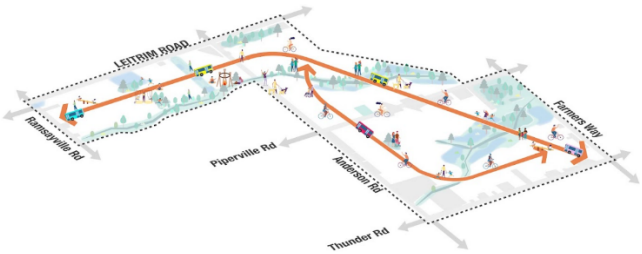



*Table 1: Mobility Spine Alignment Evaluation Summary*

| Category | Option 1 | Option 2 | Option 3 | Option 4 |
|---|---|---|---|---|
| Development & Land Use | | | | |
| Transportation & Mobility | | | | |
| Natural System, Parks, Recreation & Open Spaces | | | | |
| Servicing | | | | |
| Phasing & Implementation | | | | |

Based on the preliminary evaluation, Option 2 was identified as the preferred alignment, offering a strong balance between mobility function, land use integration, and environmental sensitivity. It enables the development of a continuous, transit-supportive corridor while largely avoiding disruption to existing development and natural systems.

Option 1 was ruled out due to its impacts on existing properties. Since the alignment extends along existing lot & concession roads with existing developments, the properties along those streets limit the opportunities for transit-supportive densities to be implemented along the Mobility Spine. Additionally, upgrading the existing roadways to implement the proposed Mobility Spine design is expected to be highly disruptive on those existing communities.

Option 3 provides greater access to the Tewin community and thus more opportunities for transit supportive densities along the corridor. However, this alignment requires additional land near Piperville Road and may also impact existing properties and environmentally sensitive area. Similarly, even though Option 4 provides the

greatest access through the site, this alignment crosses multiple highly significant natural area and is expected to negatively impact the conservation and rehabilitation efforts central to the Tewin planning process.

Option 2 was identified as the preferred alignment because it offers a strong balance between mobility, land use, and environmental conservation. The alignment provides efficient access to most of the Tewin development area, while also largely avoids the disruptions on existing properties and natural systems. This option was carried forward for refinement in later phases of the process.

## 7.5 Refined Internal Transit Strategy

Transit will be facilitated by the preferred Mobility Spine alignment along with a refined supporting loop road, optimizing the coverage and connection within Tewin. As shown in Figure 10, this configuration ensures that approximately 95% of residents live in a 400-metre walking distance of transit service, which is in line with the definition of peak period base route according to OC Transpo's Transit Service and Fare Policy Manual (May 2025), and meeting a widely recognized threshold for walkable transit access [10].

This approach aligns with Canadian research findings, which consistently identify proximity as a strong predictor of mode choice[11, 12], and where communities with higher rates of transit accessibility (i.e., residents living within a 400–500 m walk) have greater transit mode shares, particularly when paired with land patterns that support density and mixed uses[10]. Tewin's land use strategy supports this by accommodating higher-density residential, institutional, and commercial uses along or near the Mobility Spine. This feeds ridership and allows for transit-supportive development.

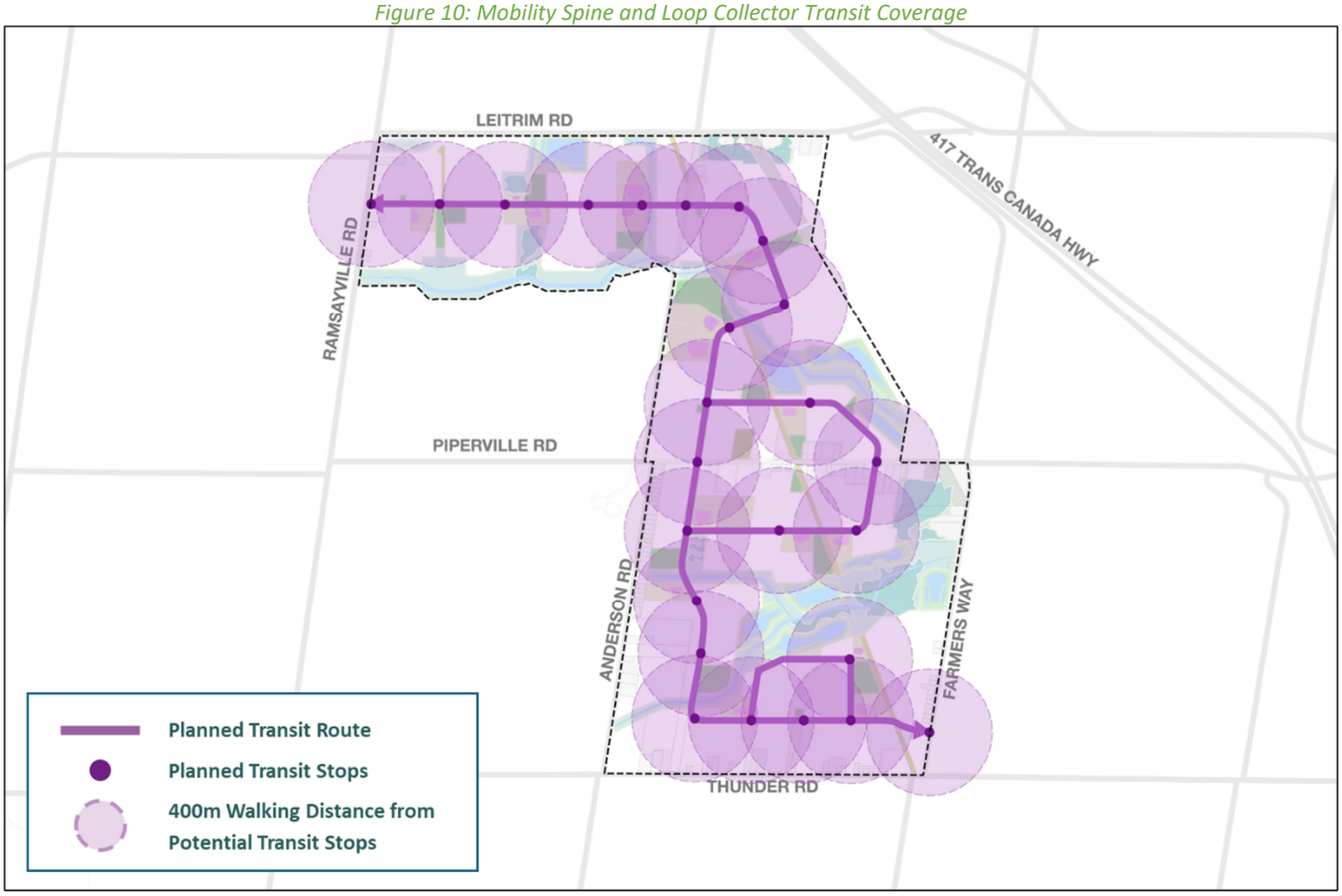
To ensure transit reliability, school sites are encouraged to be designed with vehicular accesses to interface with side streets rather than vehicular access directly onto the Spine. This design mitigates congestion and dwell time delays while maintaining safe and accessible routes for students and families.

[10] D.F. Crowley, A.S. Shalaby, H. Zarei, *Access Walking Distance, Transit Use, and Transit-Oriented Development in North York City Center, Toronto, Canada*, Transportation Research Record: Journal of the Transportation Research Board (2009), 1 January 2009.

[11] B. Wong and K.M.N. Habib, *Effects of accessibility to the transit stations on intercity travel mode choices in contexts of high speed rail in the Windsor–Quebec corridor in Canada,* Canadian Journal of Civil Engineering (2015), 9 September 2015.

[12] N. Eluru, V. Chakour, and A.M. El-Geneidy, *Travel mode choice and transit route choice behavior in Montreal: insights from McGill University members commute patterns*, Public Transport (2012), 29 August 2012.

*Figure 10: Mobility Spine and Loop Collector Transit Coverage*




To further enhance the performance and appeal of transit, a range of priority measures are proposed along the Mobility Spine:

- Curbside bus lanes, allowing buses to bypass congestion points; and
- Transit signal priority to reduce intersection delays and improve overall travel time and reliability.

These measures are consistent with other transit practices, where priority infrastructure is shown to improve speed, reliability, and ridership potential, especially in newly urbanized areas[13].

Tewin's internal transit strategy is also guided by the Tewin Integrated Mobility Model (TIMM) framework introduced in Section 6.1, which highlighted transit accessibility, service reliability, and multimodal integration as key factors in increasing the competitiveness of transit relative to private vehicles [14, 15, 16].

[13] D. Wiebe and D. Krahn, *On Street Transit Priority Measures – Putting Buses First in Winnipeg*, Transportation Association of Canada (2008), August 2008.
[14] B. Cui, G. Boisjoly, L. Miranda-Moreno, and A. El-Geneidy, *Accessibility matters: Exploring the determinants of public transport mode share across income groups in Canadian cities*, Transportation Research Part D: Transport and Environment (2020), 20 February 2020.
[15] G. Zhang, D. Wang, Z. Cai, J. Zeng, *Competitiveness of public transit travel time reliability A case study for commuter trips in Hangzhou, China*, Journal of Transport Geography (2023), 22 December 2023.
[16] M.S. Mahmoud, K.N. Habib, and A.S. Shalaby, *An Application of RP-SP Data for Joint Estimation of Mode Choice Models*, Transportation Research Board (2016), January 2016.

Importantly, the transit system is embedded within a broader complete network, that has been planned intentionally to avoid future retrofit requirements wherever possible. While the Mobility Spine forms the backbone of service, a grid of supporting streets allows for local circulation, active transportation, and distributed multimodal access across the community. This reduces pressure on any one corridor, improves system resilience, and enhances the legibility and usability of the overall mobility network.

For residents travelling to or from Tewin by car, the supporting street network also provides multiple access points to the concession road system, which helps to distribute vehicle volumes and reduce congestion along the Spine, maintaining its efficiency as a high-functioning transit corridor. The structure and function of this network are described in further detail in Section 7.7.

## 7.6 Tewin Public Meeting #3

Public Meeting #3, held on January 9, 2025, marked another important milestone in the ongoing Planning and Environmental Assessment (EA) process for Tewin. This session built upon the foundational work and public input gathered through the first two meetings and presented more refined materials for community feedback. Participants were invited to review and comment on:

- The emerging community structure, including the layout of the Mobility Spine and surrounding neighbourhoods;
- The draft road network, including supporting street connections and the preliminary collector network;
- Preliminary concepts for cycling infrastructure, natural trails, and active transportation access points;
- Continued evaluation of mobility options using the established evaluation criteria; and
- Early ideas for community facilities, sustainability strategies, and design integration.

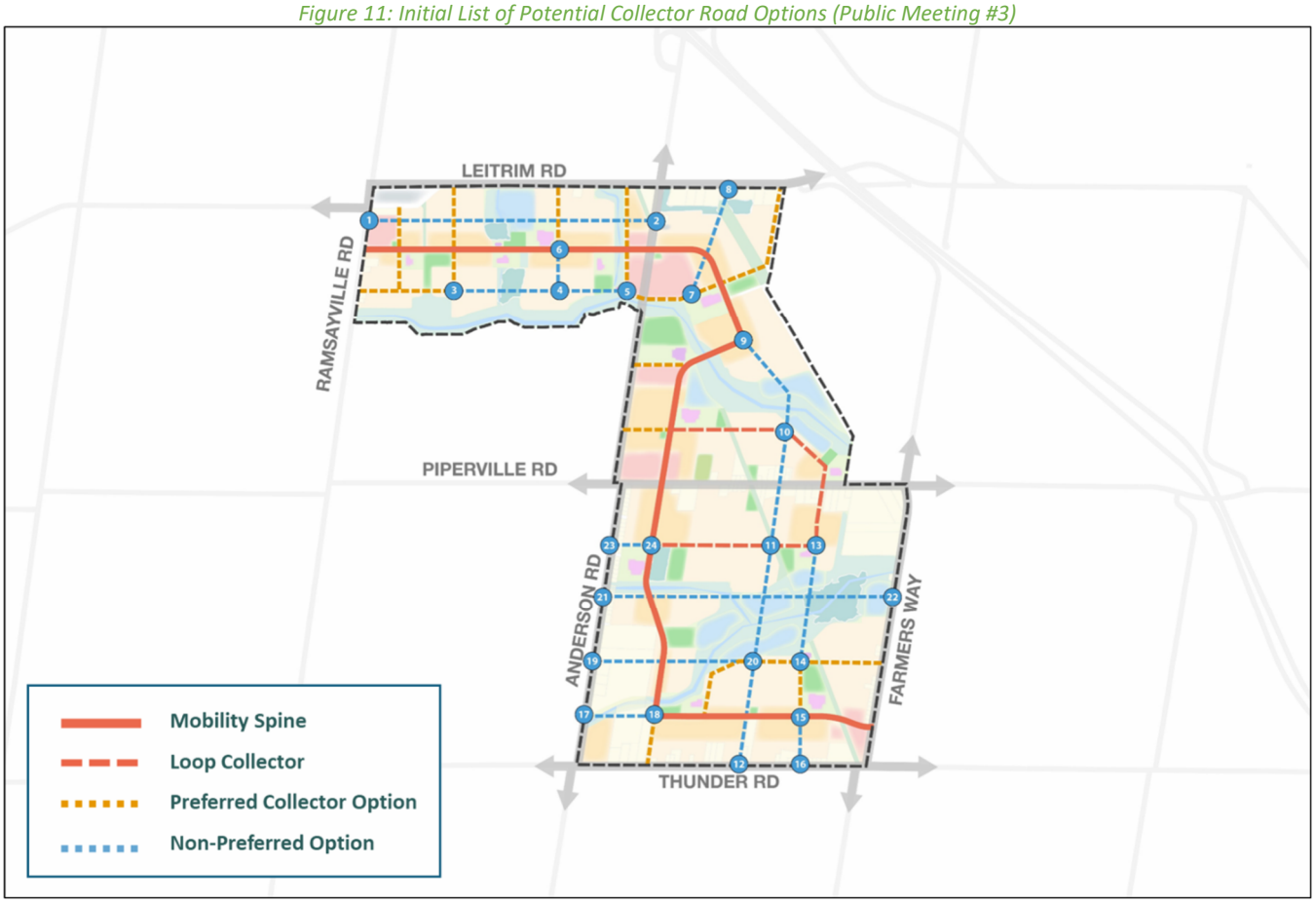
The feedback gathered helped refine the technical direction of the plan and ensure alignment with both community needs and policy objectives. A summary of public input received during this session is available in Appendix B. Key elements introduced at this stage, including the supporting road network, the internal active transportation system, and proposed roadway cross-sections, are discussed in the following sections.

## 7.7 Internal Street Network and Vehicular Access

As part of the Mobility Strategy, a series of Neighbourhood Collector Street options were initially identified to support internal circulation and connect Tewin to the surrounding concession road network. These collector roads are intended to complement the Mobility Spine, enable secondary vehicle access, and establish a resilient, permeable internal street grid. The full set of preliminary alignment options is shown in

Figure 11.

*Figure 11: Initial List of Potential Collector Road Options (Public Meeting #3)*

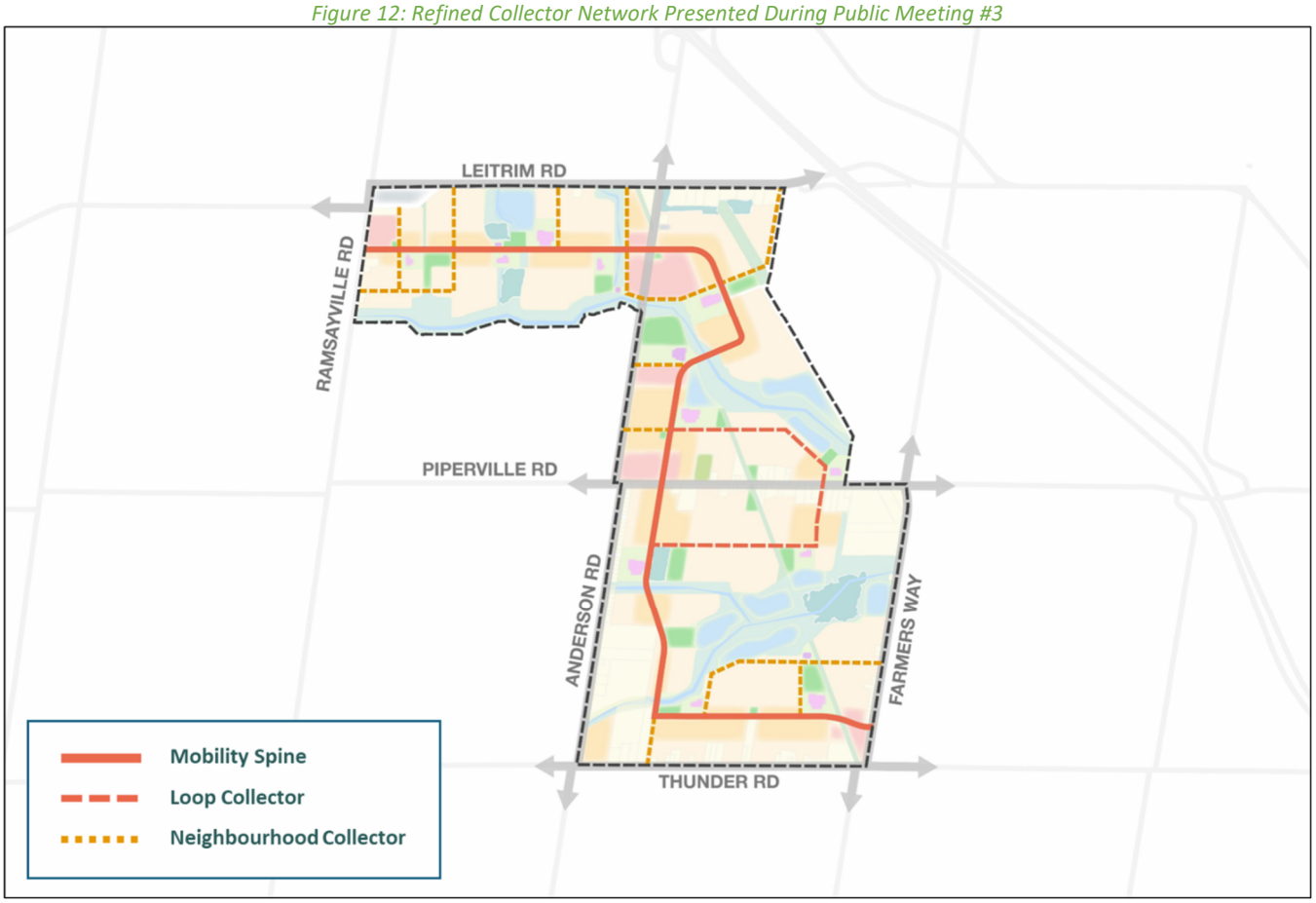



During Public Meeting #3, these options were presented and evaluated using the criteria outlined in Section 7.3. This screening process considered environmental impact, land use compatibility, implementation feasibility, and the overall contribution of each link to community connectivity. The outcome of this assessment was a refined network of collector roads, illustrated in Figure 12.

Several segments were removed from consideration based on their anticipated negative impacts:

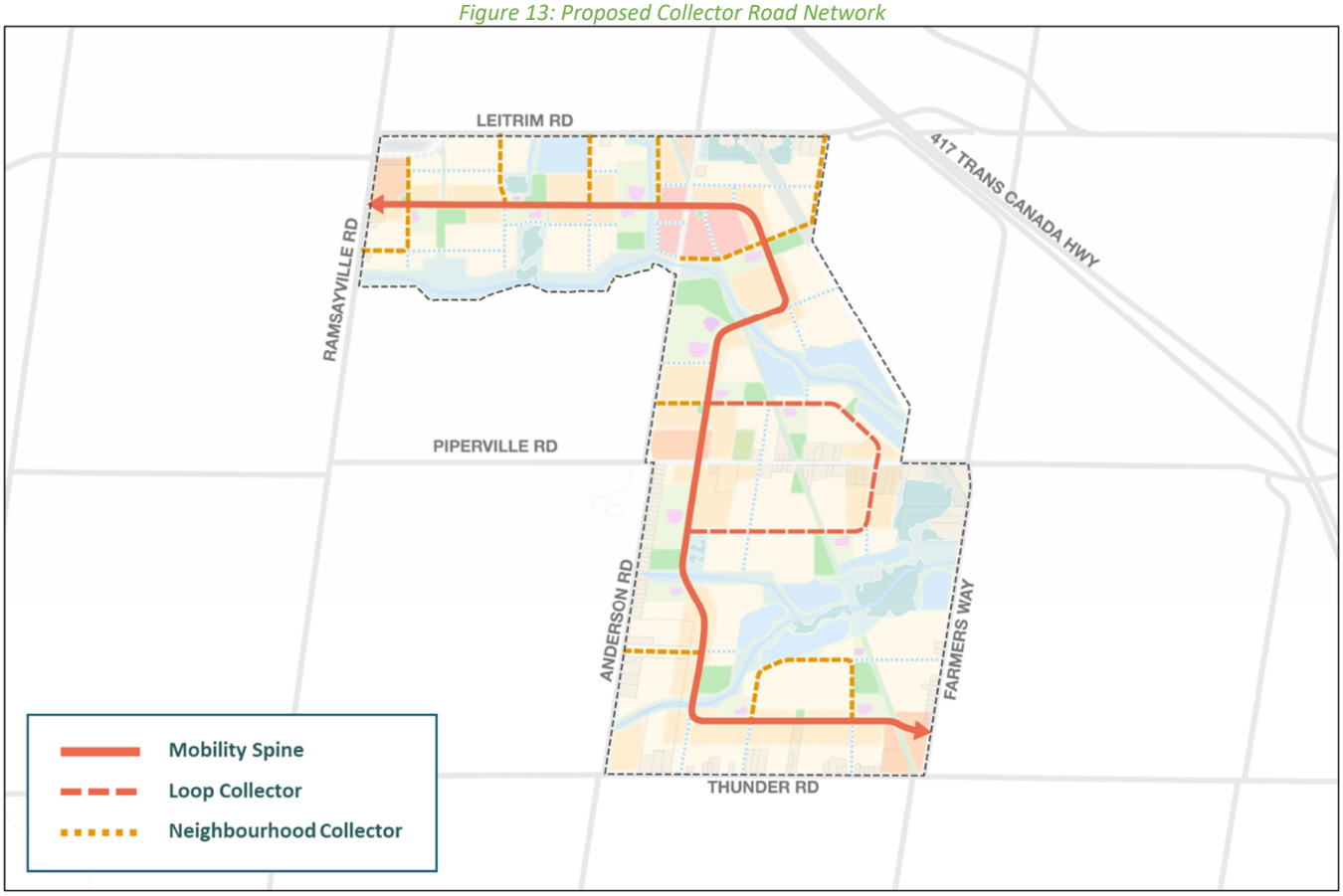
- **Segment 1-2:** Eliminated due to constrained connections, significant land use disruption, and limited mobility benefit.
- **Segments 3-4 and 4- 5:** Removed due to significant environmental impacts, including disruption to mature natural features and drainage patterns.
- **Segment 4- 6:** Removed following the exclusion of adjacent segments, which reduced its strategic value.
- **Segments 7-8, 10-11, 13-14, 15-16, 17-18, 21-22, and 23-24:** Removed due to property impacts, weak connectivity benefit, or poor performance on environmental and implementation criteria.
- **Segment 9-10:** Removed due to significant impact on storm water management features.
- **Segment 19-20:** Initially considered to be removed due to impacts on existing properties; later part of segment 19 - 20 was retained as part of the larger developable area scenario.

*Figure 12: Refined Collector Network Presented During Public Meeting #3*




Following further technical refinement, some of the remaining collector links were reassessed and reclassified as local roads in the final network. This change reflects both site-specific design constraints and a desire to support a more flexible, context-sensitive street hierarchy, while maintaining the same level of community access and permeability. The amended collector road network is shown in Figure 13, and later presented in Section 10 as part of the recommended transportation solution for Tewin.

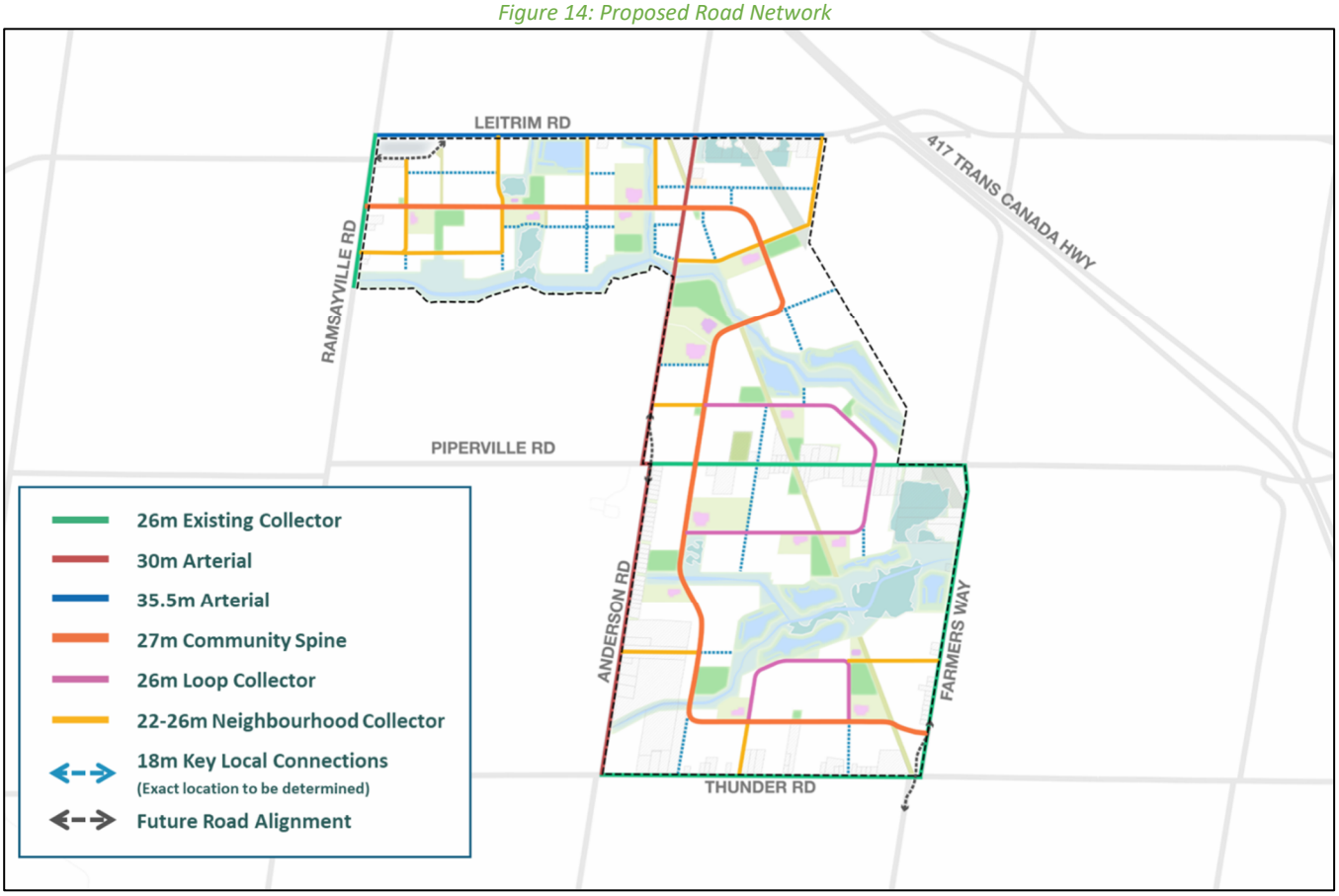
*Figure 13: Proposed Collector Road Network*




The resulting network forms a balanced system of supporting streets that maintains essential vehicular access, minimizes intrusion into sensitive areas, and integrates with the broader land use and servicing strategy. While some road classifications may evolve through detailed design, the overall network continues to serve its intended function, supporting mobility within the community and providing critical connections to the surrounding regional road system. The amended internal road network, with revised classifications, is shown in Figure 14.

The Environmental Assessment (EA) requirements under Municipal Class EA (MCEA) for the proposed Mobility Spine and collector roads are included in Appendix E. As further described in Section 10, the analysis found that the collector roads throughout Tewin are Schedule B EA projects as per the MCEA. The full list of collector roads are later presented in Section 10 as part of the recommended transportation solution for Tewin.

*Figure 14: Proposed Road Network*




Together, the Mobility Spine and supporting road network will offer multiple travel options for people driving to, from, or within Tewin, supporting the overall goal of a balanced, multi-modal and integrated community structure.

## 7.8 Internal Active Transportation Network

Tewin's active transportation (AT) network has been developed in alignment with the City of Ottawa's New Official Plan (2021), reflecting city-wide goals for fostering safe, accessible, and integrated mobility options for people of all ages and abilities [6]. The AT network is a foundational element of the community's complete mobility strategy, enabling local trips, school access, recreation, and seamless first- and last-mile connections to future transit service[17].

Rather than applying a one-size-fits-all approach based on standard roadway cross-sections, Tewin's AT network reflects the principles of complete networks, where the entire mobility system works cohesively to serve all users. Mode separation, context sensitivity, and trip purpose have been key considerations in deciding where and how active transportation facilities are implemented.

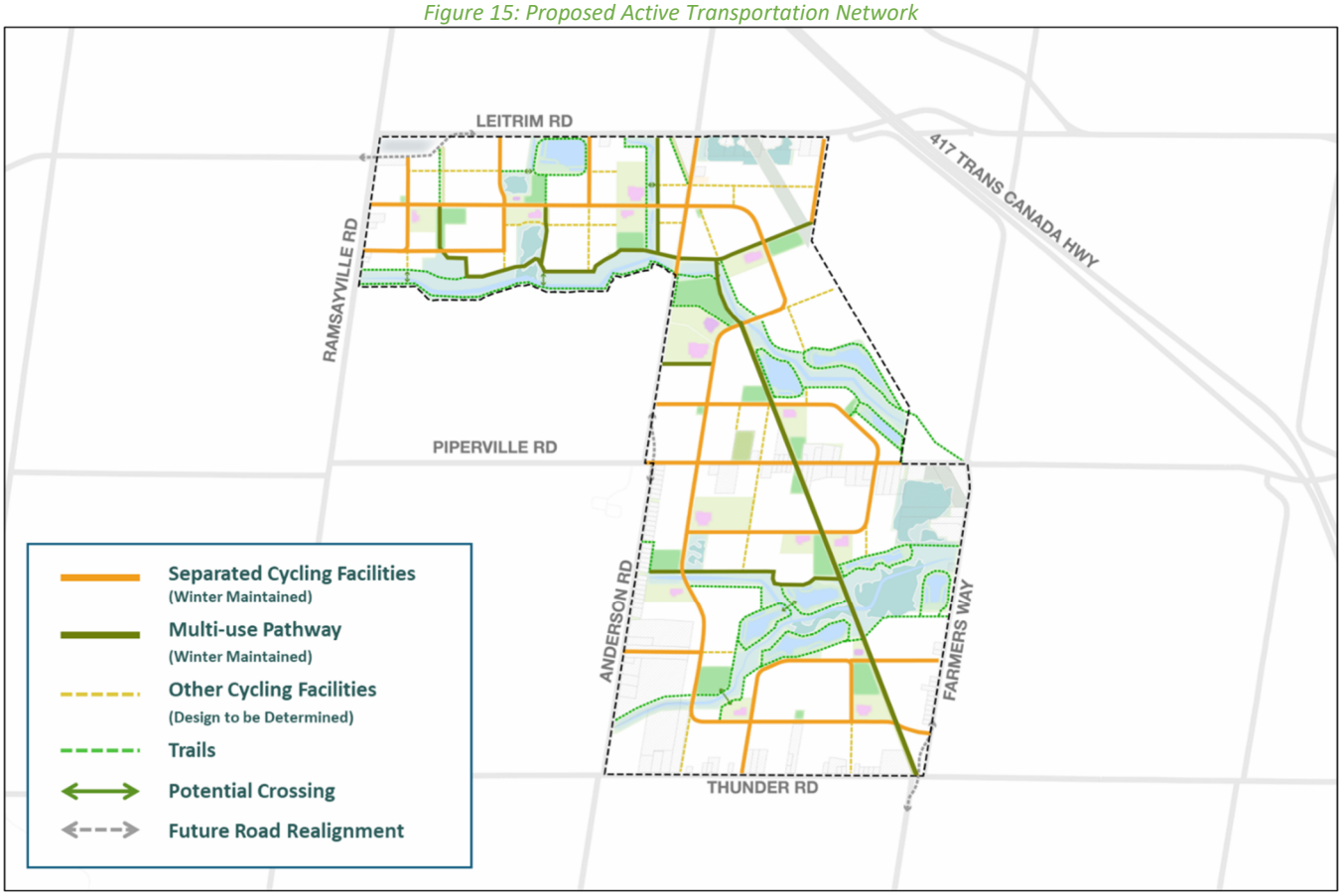
To guide infrastructure design and maintenance planning, the AT network will include the following types of facilities:

[17] City of Ottawa, *Transportation Master Plan Part 1 Policies*, City of Ottawa (2023), April 2023.

- **Separated Active Mode Facility:** Includes dedicated sidewalks and cycling facilities. The designs mostly follow the city-standard cross-sections with a few context-specific changes. These are maintained year-round and provide direct access to schools, transit stops, commercial nodes, and mixed-use areas.
- **Multi-Use Pathways (MUP):** Off-road hard surface cycling facilities that are maintained year-round and provide access to transit.
- **Trails:** These trails weave through natural and green spaces, supporting leisure and community enjoyment. While not all are winter maintained, they may be upgraded over time if new travel patterns or demand warrant all-season access and environmental mitigation measures can be effectively developed.
- **Other Cycling Facility:** Additional cycling routes along minor streets with the detailed design to be determined at the development application stage. These facilities can be designed up to MUP standard, but adjustments will be made based on the context to optimize space and user experience.

Cycling facilities will be integrated along all collector roads, with facility types selected based on context using principles from Ottawa's Designing Neighbourhood Collector Streets[18]. Options may include in-boulevard multi-use paths, protected cycling facilities, etc., tailored to traffic volumes, speeds, and street function. A comprehensive map showing the active transportation network is presented in Figure 15.

*Figure 15: Proposed Active Transportation Network*




[18] City of Ottawa, *Designing Neighbourhood Collector Streets*, City of Ottawa (2019), 12 December 2019.

Sidewalks will be provided on both sides of the Mobility Spine and key collector roads to ensure walkability along high-demand corridors, consistent with the City of Ottawa's Official Plan and Pedestrian Plan[19] and Designing Neighbourhood Collector Streets guidelines[18]. On local roads, sidewalks will be provided in accordance with Policy 4.1.2(6) of the New Official Plan, which mandates direct pedestrian connections to schools and other community destinations[6]. However, given the vast open space system and trail network that is unique to Tewin, the requirement may be met with an alternative form of connection that equally supports safety and AT priority with the goal to minimize redundancies such as sidewalks that exist in close proximity parallel with multi-use pathways. Where a street runs parallel to a Tier 1 or 2 path, the path will serve as the primary AT route.

To promote walking and cycling as preferred options, the network will be reinforced with human-scale design features:

- Activated frontages and entrances along key corridors to support "eyes on the street," consistent with Crime Prevention Through Environmental Design (CPTED) principles[20];
- Street trees and landscaped buffers to improve thermal comfort and urban character; and
- Traffic calming features, such as raised crossings and narrowed lanes, to improve safety for vulnerable road users, following practices supported by Ottawa's design guidelines[21].

Together, the on-street and off-street elements form a highly connected, accessible, well-maintained and multimodal AT network that enhances community cohesion and supports transit use by providing seamless first- and last-mile options. With the entire population of Tewin within 400m of cycling infrastructure, this strategy aligns with regional guidance such as Metrolinx's 2041 Regional Transportation Plan and City of Ottawa's 15-minute neighbourhood objective, which emphasize integrated active and transit networks for sustainable growth[22].

## 7.9 Internal Roadway Right-of-Ways and Cross-Sections

Tewin's internal street network is envisioned to be the foundation of a complete, inclusive, and sustainable community. Each roadway cross-section is planned to balance multimodal functionality with adjacent land use, landscape character, and environmental sensitivity. Streets in Tewin serve not only to move people but also to shape a vibrant public realm, encourage sustainable travel, and strengthen the community's relationship with nature.

The cross-sections reflect a layered and context-sensitive approach, in which different corridors prioritize different modes to optimize safety, accessibility, and comfort for all users. A complete mobility network is achieved by integrating major roads with a fine-grained pattern of local streets and a robust trail system. Together, these elements enable short trips by foot or bike, offer an intuitive wayfinding, and reduce reliance on auto travel.

Where roadway corridors run parallel to Tewin's multi-use trails, the mobility network has been thoughtfully designed to minimize duplication and enhance environmental integration. Where trails run parallel to roads, such trails will serve as the primary infrastructure for pedestrians and cyclists and will be designed for year-round, all-ages access. This approach preserves walkability and active transportation connectivity while minimizing network duplication and enhancing the community's connection to its natural setting. These adjustments reflect Tewin's broader commitment to climate-conscious, human-scale design that prioritizes quality of experience.

[19] City of Ottawa, *Ottawa Pedestrian Plan*, City of Ottawa (2013), November 2013.
[20] M. Hunt, *Crime Prevention Through Environmental Design (CPTED)*, Ottawa Police (2023), 6 July 2023.
[21] City of Ottawa, *Traffic Calming Design Guidelines*, City of Ottawa (2019), April 2019.
[22] Metrolinx, *About the 2041 Regional Transportation Plan*, Metrolinx.

Access points will follow regulations and restrictions published by the City of Ottawa under Private Approach By-law No. 2003-447[23]., as amended from time to time. This document outlines standards for frontage use, distance from other access points and intersections, and several other regulations, such as site-specific restriction for frontage and number of accesses. Where frontages on multiple roadways exist, the access shall be located on the frontage with the least conflicts with sustainable modes of travel, or laneways.

The overall structure of the mobility network, including all internal roadway classifications, is illustrated in Figure 14 in Section 7.7. This section provides a description of all major street types planned within Tewin, including both standard road types and categories that serve unique placemaking or shared-use functions. The road types include:

- Community Spine
- Loop and Neighbourhood Collectors
- Local Streets
- Special Streets
- Shared Streets

### 7.9.1 Mobility Spine and Preferred Option

Three cross-section alternatives for the Mobility Spine were presented at Public Meeting #3, each designed to support a complete, multi-modal corridor while maintaining a transit-supportive main street character. It is intended that the Mobility Spine will be maintained as a place for all transportation modes rather than being car oriented. All options include dedicated space for pedestrians, cyclists, and transit, and share a consistent right-of-way width for active transportation facilities. However, the alternatives differ in terms of transit configuration, boulevard placement, and landscape treatment. The options considered include:

- **Option 1:** Features curbside bus-only lanes, with trees and bus shelters located along the outer edge of the right-of-way.
- **Option 2:** Also includes curbside bus-only lanes, but places sidewalks at the outer edge, modifying the pedestrian realm while maintaining a similar transit layout to Option 1.
- **Option 3:** Introduces centre-running dedicated transit lanes, with bus shelters adjacent to the central transit alignment.

A summary of the three cross-section options is presented in Figure 16 through Figure 18, with corresponding evaluation scores provided in Table 2. The evaluation considered multimodal functionality, environmental performance, implementation feasibility, and consistency with Tewin's urban design principles. Full rationale and detailed scoring are provided in Appendix C.

[23] City of Ottawa, *Private Approach (By-law No. 2003-447)*, City of Ottawa

*Figure 16: Mobility Spine Cross-Section Option 1*

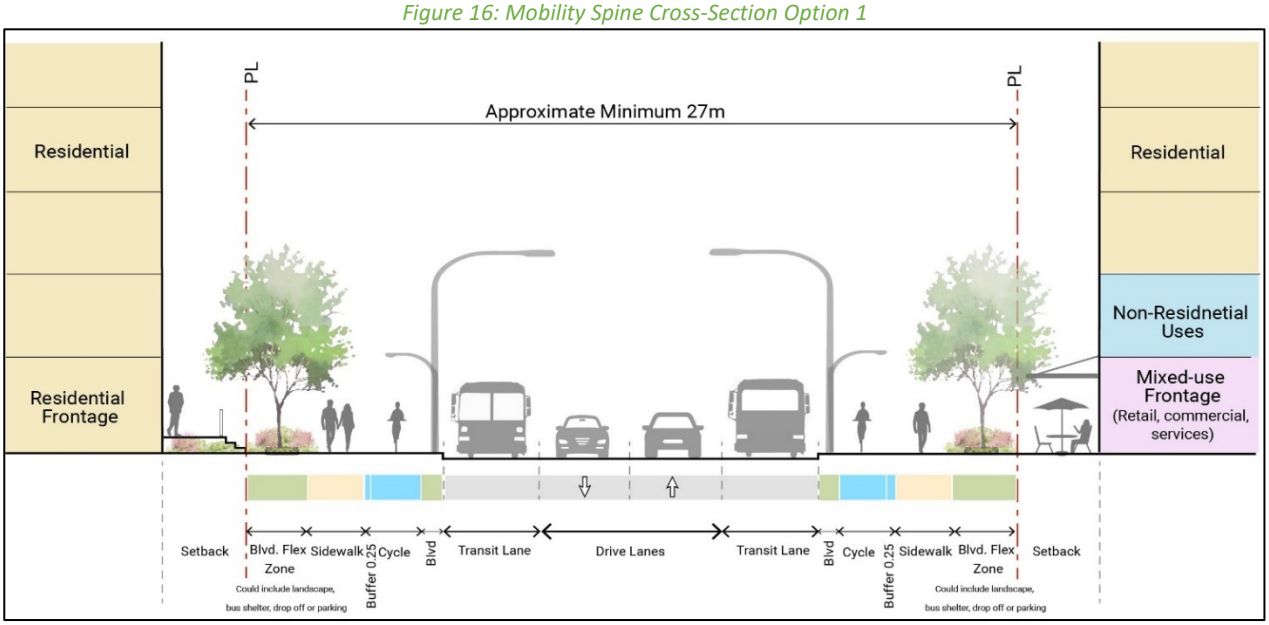



*Figure 17: Mobility Spine Cross-Section Option 2*

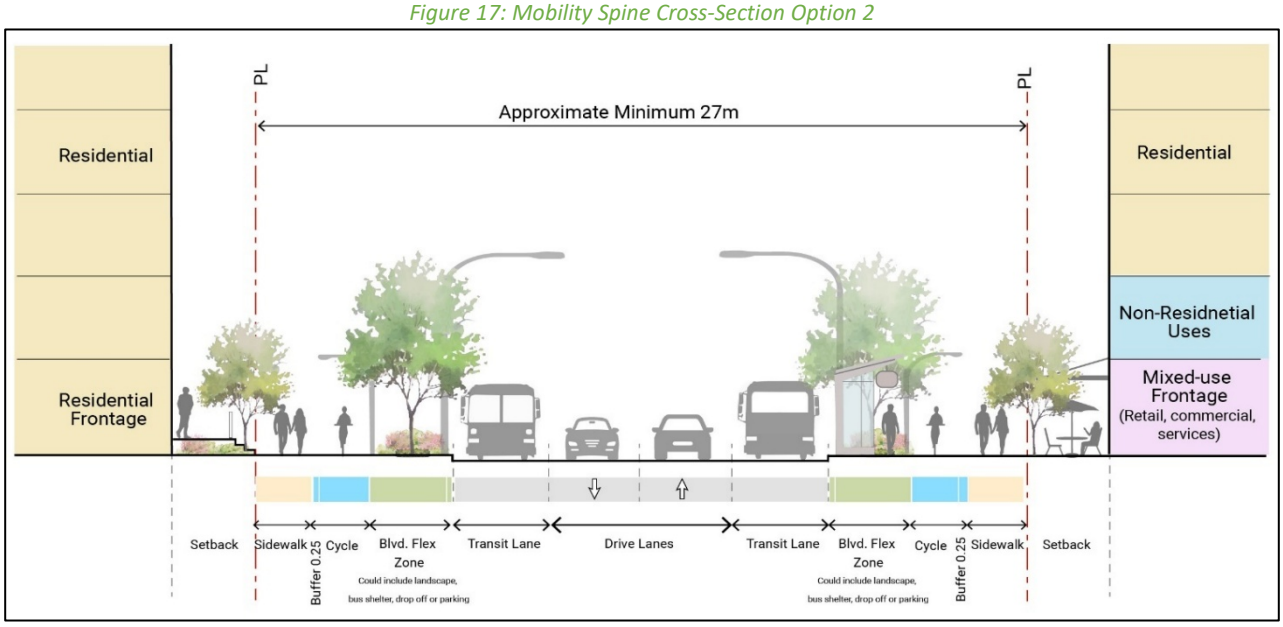


*Figure 18: Mobility Spine Cross-Section Option 3*

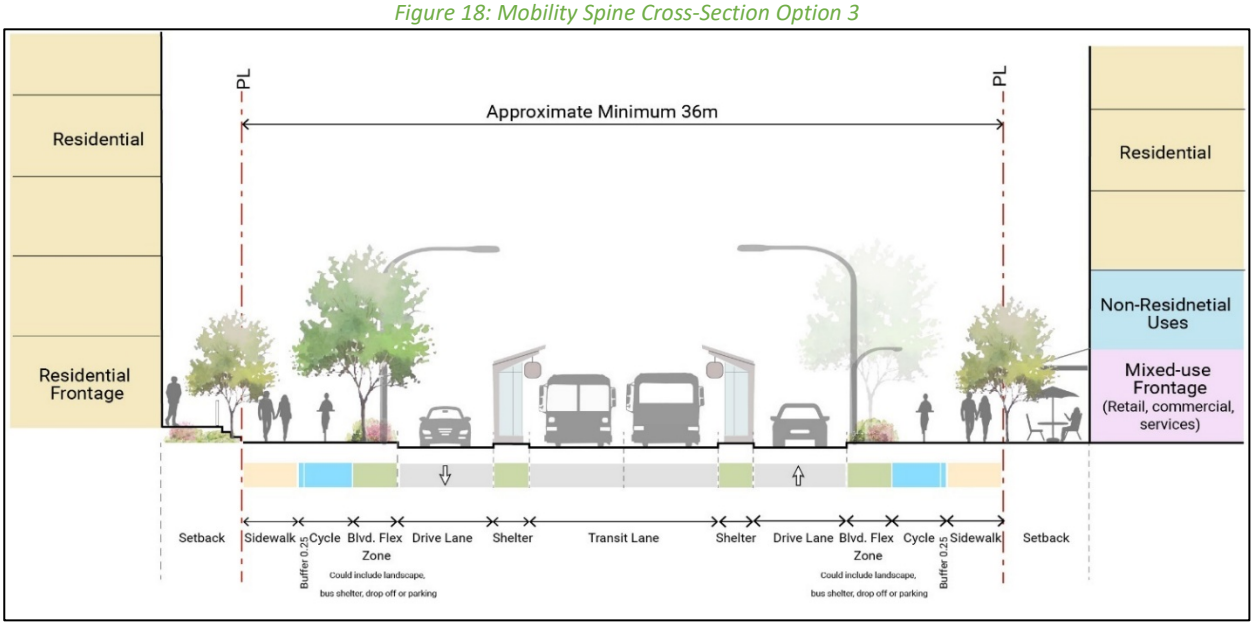



*Table 2: Mobility Spine Cross-Section Evaluation Summary*

| Category | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| Development & Land Use | | | |
| Transportation & Mobility | | | |
| Natural System, Parks, Recreation & Open Spaces | | | |
| Servicing | | | |
| Phasing & Implementation | | | |

Option 3 was ruled out due to wider pavement that could negatively impact local businesses and natural areas, undermining walkability and compact urban form. Option 2 was preferred for its superior safety, as it places boulevards between the roadway and active transportation facilities, providing better separation and comfort for vulnerable road users.

To allow design flexibility, two final cross-section options are being advanced:

- **Option A:** Unidirectional cycle tracks on both sides of the Mobility Spine, providing clear separation and predictable movement patterns for cyclists.
- **Option B:** A bi-directional cycle track on one side of the road, applied selectively in areas where it offers design advantages such as along parks, natural features, or corridors with fewer intersection conflicts.

This flexible approach allows for optimal integration of cycling facilities within different segments of the Spine, while maintaining a consistent street character and multimodal function.

*Figure 19: Proposed Mobility Spine Cross-Section Option A*

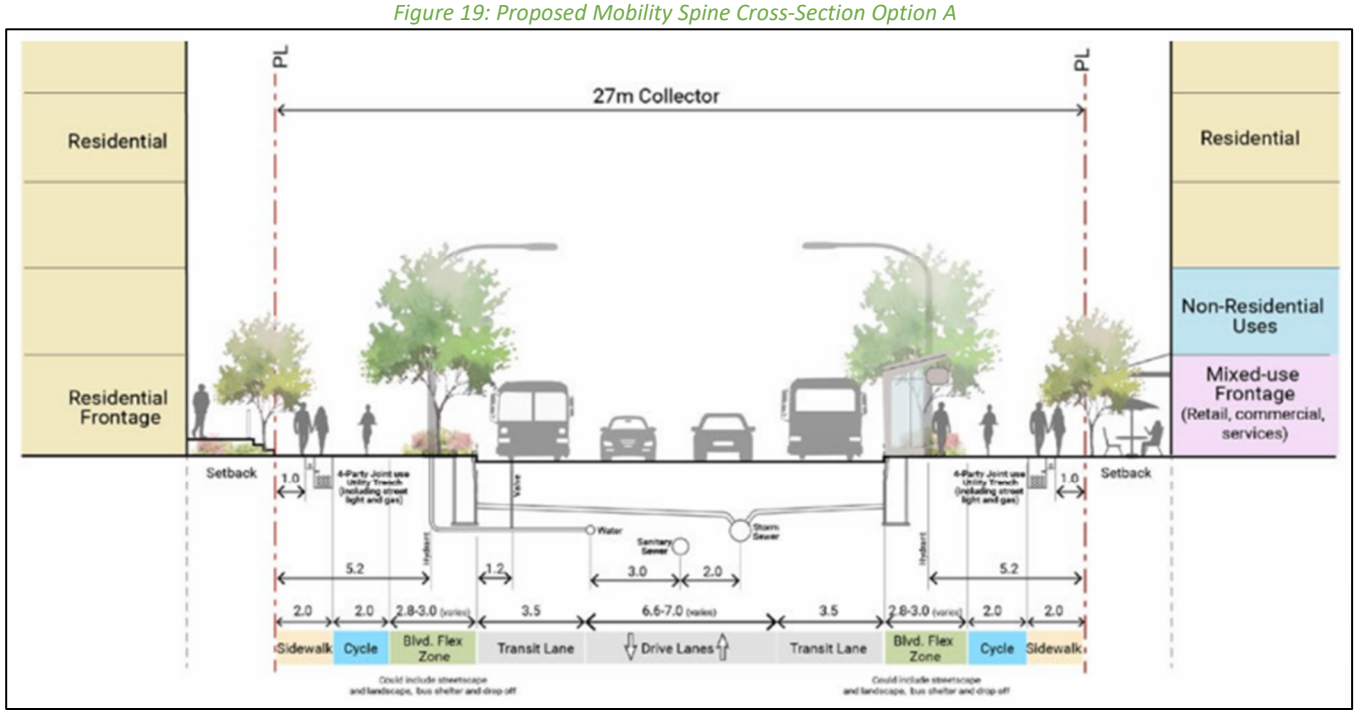
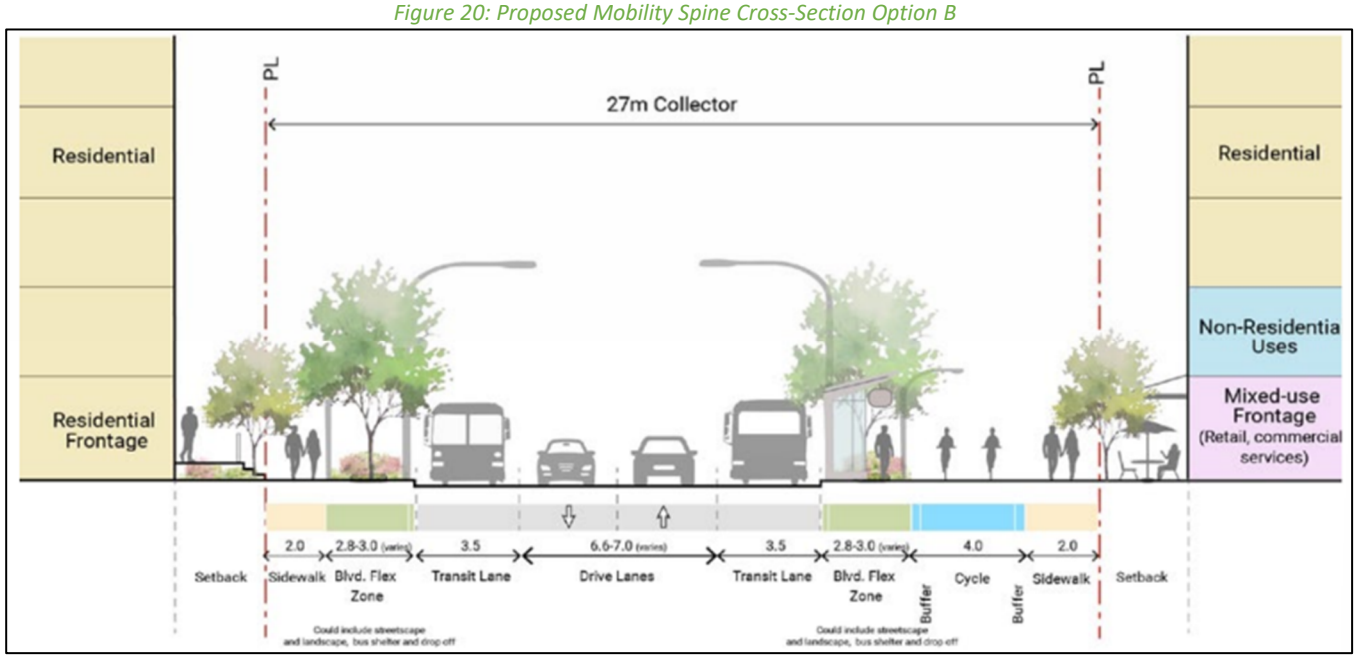



*Figure 20: Proposed Mobility Spine Cross-Section Option B*




Modal filters on the community spine are also proposed at various locations that shall prioritize transit, cycling, pedestrians, and emergency vehicles but not personal automobiles, whereas access for cars will be ensured via the local and collector network. Turning restrictions will be proposed, as necessary, to keep the road width at a pedestrian and cyclist-friendly scale, and to ensure transit priority. With respect to access points along the Mobility Spine, if there is no other option for access to a given site, the Mobility Spine may accommodate an access point. In such cases, the access point should be designed with a focus on cyclists and pedestrians. Single-family dwelling accesses shall be prohibited on the Mobility Spine where possible. Additionally, access consolidation with neighbouring properties shall also be considered during the development stages.

### 7.9.2 Special Streets

Special Streets in Tewin are designed as signature public spaces with elevated attention to placemaking, landscape, and user experience. They function as iconic corridors that anchor identity, connect people to nature, and define civic destinations. These corridors combine mobility with meaning, reinforcing key elements of Tewin's community vision.

***Tewin Market Street***

Tewin's Market Street will be a vibrant, pedestrian-focused retail street that connects the Community Spine with The Commons, acting as an extension of the Harvest Walk. Designed as a flexible space shared by all mobility modes, it will be lined with shops, restaurants, and mixed-use buildings — creating a lively destination at the heart of the community.

***Headwaters Way***

Headwaters Way will be a lush, landscaped street that frames the southern and western edges of the Community Core, offering strong visual and physical connections to the Commons. With a green, pedestrian- and cyclist-friendly design, it will feature a primarily residential edge, complemented by pockets of retail near Market Street.

***Anderson Gateway***

The Anderson Gateway will serve as a western entrance to Tewin's open space network, connecting local residents along Anderson Road to the Reflecting Woods and surrounding natural areas. With a school, Park, and trails, it will offer easy access to recreation, gathering spaces, and the broader Open Space System.

These Special Streets will become key anchors of identity, forming multifunctional public spaces that enhance both mobility and community life.

### 7.9.3 Loop and Neighbourhood Collectors

Loop and Neighbourhood Collector roads in Tewin are planned with right-of-way width of 22 metres. These collectors will serve as the secondary mobility layer, supporting the Mobility Spine and providing access to neighbourhoods, natural areas, and adjacent concession roads.

While the right-of-way for each collector segment has been established through the mobility planning process, the detailed cross-sections will be finalized through future Plans of Subdivision. At that stage, the City of Ottawa's Designing Neighbourhood Collectors Guidelines[18] will serve as a reference to inform the design of each segment. Final cross-sections will be selected using a context-sensitive approach that considers adjacent land use, transit function, and environmental conditions.

Generally, all collectors will have dedicated and separated cycling facilities or multi-use pathways to prioritize the active transportation network. Where collector corridors run parallel to year-round facilities that are accessible for all ages and provides direct access to properties along the corridor, cross-section elements such as sidewalks and/or cycling infrastructure may be modified or consolidated to avoid redundancy. This ensures that the street network maintains a human-scale and environmentally conscious design, minimizes unnecessary hardscape, and leverages Tewin's extensive trail system as an integral part of its mobility framework.

### 7.9.4 Locals

Local roads in Tewin are generally planned with a standard 18-metre ROW[24] and serve as the most intimate components of the mobility network. These streets provide fine-grained access to residential parcels and local destinations, and are designed to be walkable, green, and traffic calmed.

[24] City of Ottawa, *18.0m ROW CROSS SECTION*, City of Ottawa (2022), August 2022.

To support neighbourhood character and active mobility:

- Pedestrian facilities are provided on all local streets, except on woonerfs.
- On-street parking is introduced, where appropriate.
- Tree-lined boulevards, chicanes, and textured paving will calm traffic and enhance pedestrian comfort
- Tactile Walking Surface Indicators (TWSI) will be provided to ensure accessibility requirements are met

As the community evolves, the use of one-way local streets and window streets (e.g. 13.5m ROW width) will be explored in constrained contexts or areas where additional traffic calming and flexible design are desired.

### 7.9.5 Shared Streets and Woonerfs

Shared Streets and Woonerfs represent low-speed, pedestrian-priority corridors that serve different community functions while supporting the same overarching vision: creating intimate, safe, and flexible public realms.

***Shared Streets / Woonerfs***

Typically located in retail nodes or community destinations, shared streets/woonerfs are "curbless" environments where pedestrians, cyclists, and slow-moving vehicles coexist in a flexible, human-scaled space. Ideal for residential laneways, and short loops, these streets emphasize play, safety, and social interaction over vehicle movement. Key design elements include:

- Distinctive paving treatments
- Reduced vehicular speeds (<20 km/h)
- Minimal signage and horizontal traffic calming
- Street furniture, lighting, and seasonal programming elements
- Limited vehicle access, prioritizing local deliveries and emergency services
- Narrow, shared right-of-way with decorative paving
- Generous landscaping, planters, and bollards
- No curbs and few traffic controls
- Emphasis on passive surveillance and child-friendly environments
- Maintain AODA design standards

These flexible street types create inviting spaces that contribute to social life, improve perceived safety, and elevate the quality of everyday experiences. These opportunities will be explored in later stages of detailed design and future development applications.

## 7.10 Parking and Loading

Parking and loading are essential components of a functional community for both the core area and neighbourhoods. In Tewin, parking and loading are carefully planned with sustainability, walkability, and the community's human-scale character in mind. Rather than defaulting to conventional supply-driven models, Tewin's parking and loading strategy embraces flexibility, efficiency, and environmental responsibility, aligning with its long-term mobility and placemaking goals.

***Parking Strategy***

Tewin's parking approach recognizes that over-supplying parking can compromise urban design, discourage sustainable transportation, increase stormwater runoff, and contribute to heat island effects. As such, parking will be provided in a manner that is:

- **Responsive to context:** Parking provisions will vary by land use and location, with consideration for promoting walkable, transit-oriented centres, and more flexible strategies used in early-stage areas where demand may shift over time.
- **Shared and efficient:** Wherever feasible, parking areas will be designed to allow shared use between land uses with complementary peak periods (e.g., office and residential, school and recreation).
- **Green and discreet:** Surface lots will be buffered with landscaping, trees, and high-quality design features. Options to potentially break large lots into smaller pods are also currently explored to improve permeability and reduce visual impact.
- **Adaptable over time**: Early-phase surface parking areas in mixed-use areas may be repurposed as development intensifies, allowing for future infill without overcommitting land to parking infrastructure.

On-street parking will be permitted and managed by the City on local and collector streets, especially near parks, schools, and retail areas. Along the Mobility Spine, on-street parking will be prohibited since the curbside lanes are determined to be required to support a reliable transit service. Curbside parking areas may be seasonally reallocated for public uses such as patios or community programming, as per the City's parking management policies.

***Bicycle Parking***

Tewin's active transportation network is supported by the provision of safe, visible, and secure bicycle parking facilities throughout the community. Bicycle parking will be:

- Located at key destinations, including transit stops, parks, schools, shops, and community centres.
- Designed for daily use, with racks that secure both frame and wheels.
- Supported with end-of-trip amenities, such as bike repair stations, water fountains, and lockers, particularly at major transit nodes and public facilities.
- Enclosed, secure bicycle parking will be required in all new multi-residential, institutional, and commercial developments.

Specific requirements, such as number of bike parking required, the type of bike parking facilities provided, and maintenance required need to adhere to the City of Ottawa By-Law.

***Loading and Service Areas***

Loading and servicing are essential for community operations associated with commercial and retail activities but must be integrated without detracting from the quality of the public realm. Delivery service should also avoid conflicts with active transportation and transit trips. In Tewin, loading areas will be:

- Located at the rear or side of buildings and screened with architectural or landscape treatments to minimize visual impact.
- Accessed via rear laneways where available, reducing curb cuts and preserving uninterrupted pedestrian zones along key building frontages.
- Consolidated within development blocks wherever possible, improving operational efficiency and minimizing conflict points.
- Encouraged to be scheduled and managed to avoid peak periods for pedestrian and transit activity.

This strategy ensures that vehicle accommodation supports Tewin's broader goals of building a complete, connected, and people-oriented community.

# 8 Regional Transit Network Integration Strategy

Tewin is envisioned as a fully integrated part of Ottawa's future urban fabric. Its success as a transit-supportive, complete community depends not only on internal mobility design, but also on integration with the broader city-wide transit network. This section outlines how the City's evolving transit priorities, as captured in the updated Transportation Master Plan (TMP), set the foundation for regional transit connectivity. The following subsections describe the latest TMP transit network and the proposed regional transit strategy for Tewin, which builds upon that framework to ensure strong, long-term integration.

## 8.1 Proposed City-Wide Transit Network

The City of Ottawa's updated Transportation Master Plan (TMP) outlines a bold vision for growing transit ridership and achieving sustainable mode share targets by 2046. The plan targets a 48% mode share for sustainable transportation, including walking, cycling, and transit, with growth concentrated in both inner urban areas and suburban communities such as Riverside South, Barrhaven, and future neighbourhoods like Tewin.

In addition to guiding long-range planning, the TMP also covers Phases 1 and 2 of the Municipal Class Environmental Assessment (MCEA) process for city-wide transportation infrastructure. This means that projects identified in the TMP are supported by a problem/opportunity definition and an alternative evaluation framework that helps streamline future project-level approvals.

Under the City's "Transit First" approach, all transportation needs were first assessed through the lens of transit investment, before considering roadway expansion. This approach prioritizes transit capital spending to reduce congestion, improve access, and provide reliable alternatives to car travel. The Transit Network Development process identified two network layers:

- **The Needs-Based Transit Network**: projects needed to support growth and meet mode share targets.
- **The Priority Transit Network**: a subset of high-impact, cost-effective projects anticipated to be implemented by 2046 based on affordability.

Project prioritization was guided by the TMP's Transit Project Prioritization Framework, which evaluated potential projects based on:

- Ridership growth
- Service improvements and travel time savings
- City-building impacts (equity, proximity to major destinations, land use support)
- Cost-effectiveness

Figure 21 and Figure 22 illustrate the full Needs-Based and Priority Transit Networks, which collectively form the foundation for long-term transit integration, including connections that will be leveraged and supported by the proposed regional transit strategy for Tewin.

*Figure 21: Needs Based Transit Network*

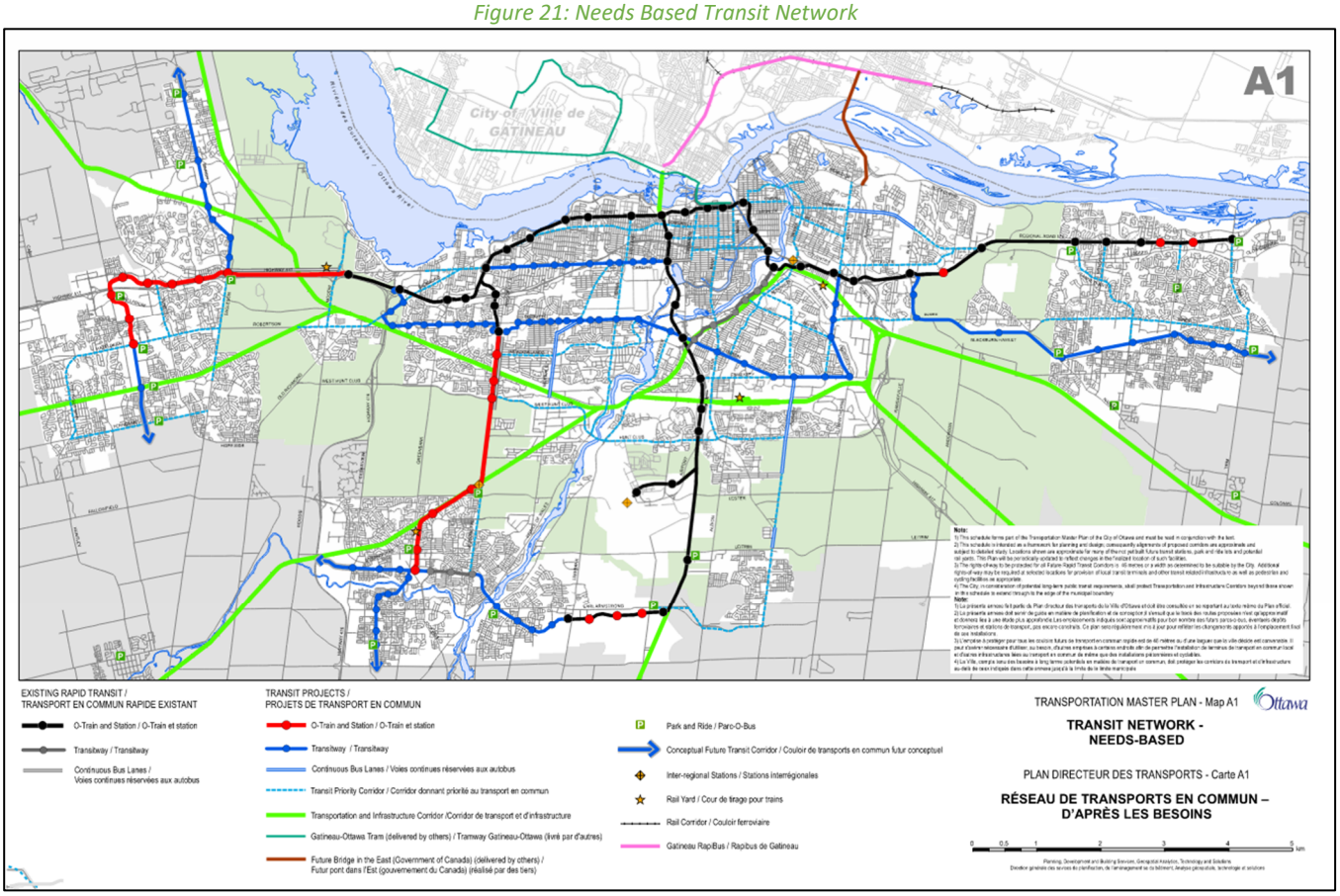
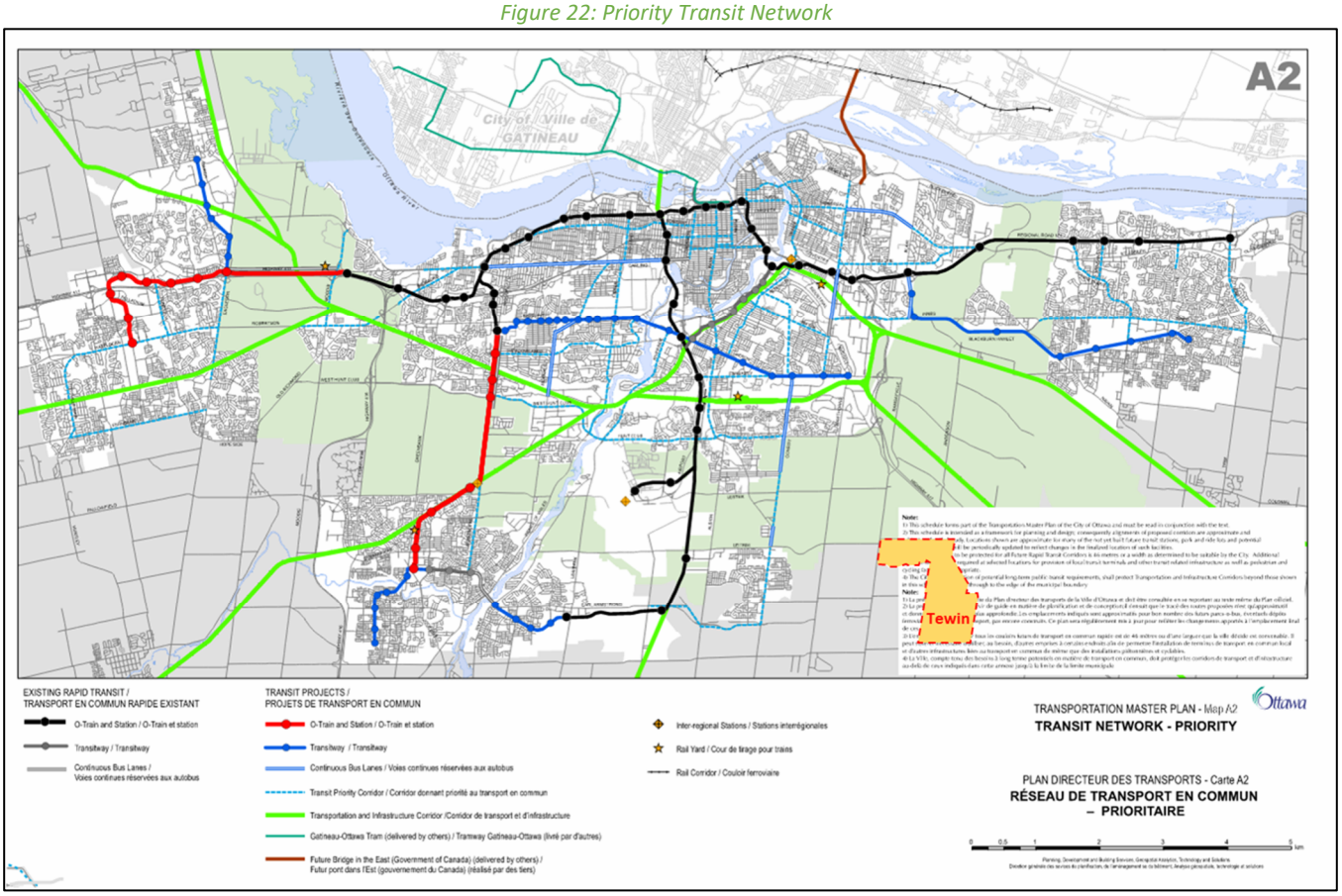


*Figure 22: Priority Transit Network*




For southeast Ottawa, the Conroy Road Transit Corridor is particularly relevant to Tewin. In collaboration with the City of Ottawa, it was determined that continuous bus lanes along Conroy Road between Hunt Club Road and Walkley Road would benefit Tewin, Findlay Creek, and the surrounding areas. Additionally, transit priority measures are being considered for the segment of Bank Street between Leitrim Road and Conroy Road. These updates are consistent with the TMP images shown below and continue to demonstrate the strategic importance of improving north-south transit connectivity for growing communities such as Tewin and Findlay Creek. The Conroy Road corridor remains part of both the Needs-Based and Priority Transit Networks and is integral to supporting long-term regional transit integration. These transit projects were planned with placeholder growth estimates for Tewin, and the Tewin Mobility Strategy has since confirmed that the recommended infrastructure is appropriate to serve the full projected population and travel demand growth induced by Tewin.

The maps shown in Figure 21 and Figure 22 have been approved by the Council as of July 2025, and the form and function of key corridors, such as the Conroy Road Transit Corridor, remain subject to refinement through future phases of study and implementation. These maps should be interpreted as conceptual representations of the City's intended direction, illustrating the evolving vision for long-term regional transit integration, including connections that will be leveraged and supported by the proposed regional transit strategy for Tewin.

## 8.2 Tewin's Regional Transit Integration Plan

Tewin's regional transit integration strategy explores how the community can be effectively connected to the broader City of Ottawa transit network, including the O-Train system and major regional transit corridors. Guided by the City's Transit First approach and Transportation Master Plan (TMP) objectives, this strategy focuses on

linking residents to high-frequency, service-rich destinations while aligning with long-range infrastructure plans. To evaluate the most effective regional connections, four conceptual desire lines were identified and assessed for feasibility, network integration, and alignment with policy objectives:

**Desire Line 1: Toward Line 2 (Greenboro / South Keys)**
This corridor would connect Tewin to Greenboro or South Keys Station on the Trillium Line (Line 2), offering access to:

- Direct access to two O-Train stations on Line 2 with airport access via Line 4 at South Keys
- Connections to South Keys Shopping Centre, Walmart, Loblaws, and other retail amenities
- A well-developed terminus area with intensification potential, aligned with TMP Policy 8-2
- An enhanced utility for passengers through a strong blend of transfer and destination functions

**Desire Line 2: Toward Line 2 (Leitrim Station)**
This corridor connects directly to Leitrim Station on Line 2. It offers:

- The shortest geographic distance from Tewin to the O-Train network
- Immediate access to Park & Ride facilities
- Airport access via transfer at South Keys

**Desire Line 3: Toward Line 1 (St. Laurent via Highway 417)**
This corridor would follow Boundary Road to access Highway 417, exiting near St. Laurent Station. It offers the following, for minimal capital investments:

- Rapid, express-like travel time via freeway, with minimal at-grade delay
- Access to St. Laurent Shopping Centre and St. Laurent Station on Line 1
- Excellent bus connectivity (e.g., OC Transpo Route 10) to downtown, Rideau, and other major destinations
- A regional retail node with potential for employment and shopping-based trip generation

**Desire Line 4: Toward Line 1 (Hurdman via Conroy and Heron)**
This corridor connects Tewin to Hurdman Station on the Confederation Line (Line 1), via Conroy Road and Heron Road - a corridor identified in the TMP's Priority Transit Network. Key advantages include:

- A direct connection to Line 1 with rapid access to downtown Ottawa, Parliament, uOttawa, and Tunney's Pasture
- Opportunities to serve intermediate destinations such as Elmvale, Trainyards, and other intensification areas
- Integration with City-identified infrastructure, maximizing policy alignment and coordinated investment
- Strong potential for all-day, multi-purpose demand

While all four (4) corridors were viable options that supported integration into the broader OC Transpo network. Desire Lines 1 (Greenboro/South Keys) and 4 (Hurdman) were selected as the preferred options for the following reasons:

- Greenboro/South Keys is both a destination and transfer hub. It hosts major commercial amenities, future intensification areas, and a growing employment base, making it highly consistent with TMP Policy 8-2, which prioritizes service to mixed-use, transit-supportive activity centres.

- Hurdman Station, accessed via Conroy Road, offers a strategic connection to Line 1 and represents an opportunity for Tewin to integrate directly into a City-led transit infrastructure project identified in the TMP's Priority Transit Network. By utilizing this planned transit corridor, the Hurdman route enables synergistic investment between the Tewin community and the City, strengthens regional coordination, and contributes to the development of a broader citywide transit framework that benefits more than just Tewin.

Both routes pass through areas with existing or planned transit priority infrastructure, supporting early implementation and long-term operational efficiency. The St. Laurent route offers similar travel times to Hurdman, particularly via Highway 417, but does not align with City-designated transit corridors or provide as many intermediate city-building benefits. It may present a good routing option for early transit at Tewin, prior to construction of the Conroy Road Transit Corridor improvements.

The Leitrim connection, while closest, lacks surrounding amenities and long-term ridership potential, and would serve more effectively as a supplemental or phased-in terminus.

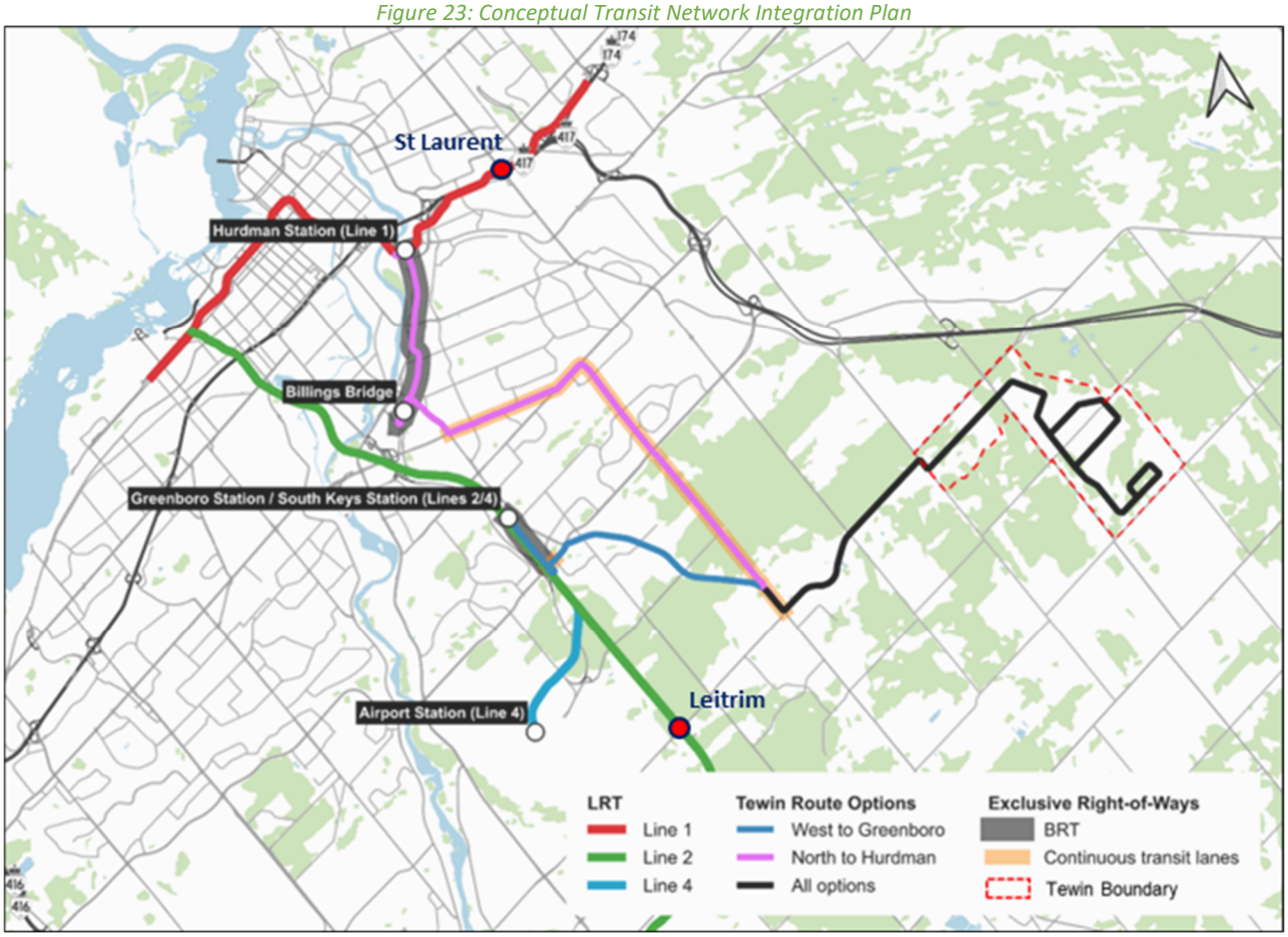
To test whether the City's transit network could accommodate Tewin's full build-out population, the Tewin team used the City-provided 2046 TRANS EMME model developed for the TMP Update to simulate travel demand based on the Tewin population and employment and integration of transit Desire Lines 1 (Greenboro/South Keys) and 4 (Hurdman) to the City's 2046 transit network. The project also accounts for the higher level of internally captured trips, as the Tewin concept is characterized as a self-sufficient 15-minute community. More details on mode share analysis and the rate of internal trip capture are included in Section 9.

It is important to note that these transit desire lines are conceptual and intended to demonstrate feasibility rather than prescribe fixed routing. As the broader transit network evolves and as service needs emerge, OC Transpo may adjust or introduce new routes over time. The primary takeaway is that Tewin is well-positioned for long-term regional transit integration with a resilient, adaptable network vision that provides multiple viable options.

A conceptual illustration of the two preferred transit desire lines is shown in Figure 23.

Based on the information above, the findings confirm that the City's 2025 TMP remains sufficient and valid for Tewin's projected growth horizon. Accordingly, no updates to Phases 1 and 2 of the Municipal Class Environmental Assessment (EA) process are required, and no addendum to the TMP is needed at this time.

*Figure 23: Conceptual Transit Network Integration Plan*



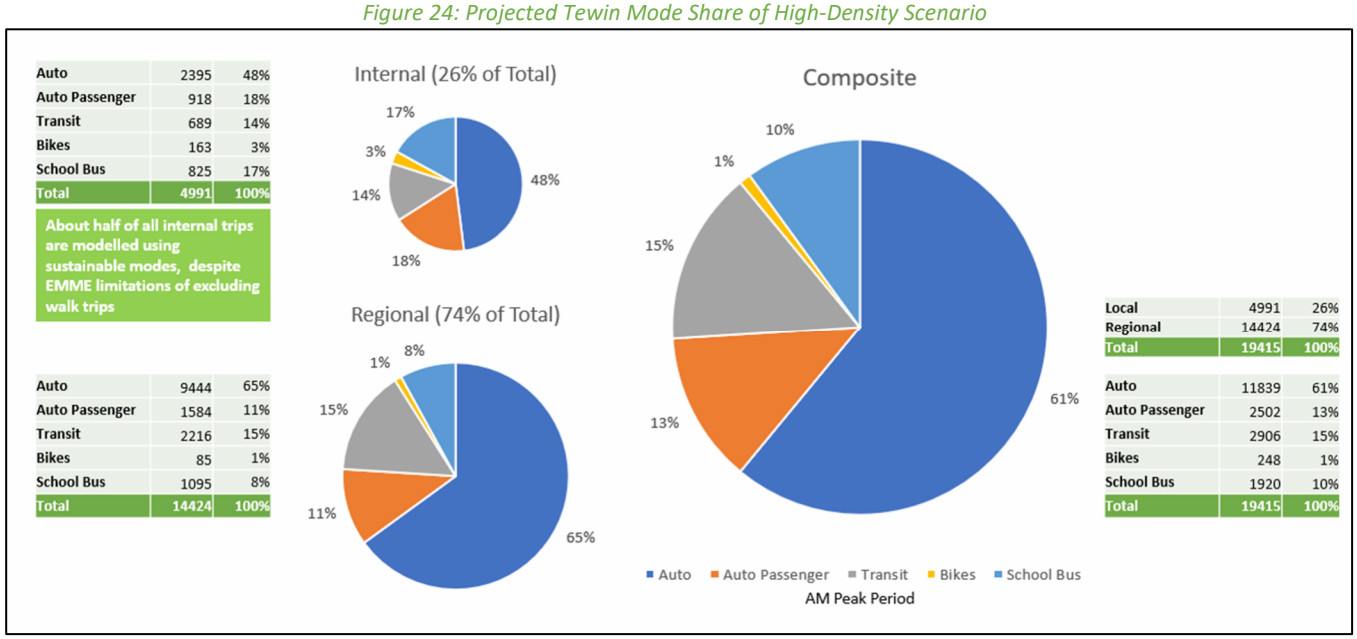

## 8.3 Tewin Transit Service in Context

To contextualize and understand Tewin's transit integration in various build-out conditions, the following scenarios were tested in the EMME model: the high-density 2046 scenario of approximately 40,900 population, and a post-period high density scenario of 58,000 population. Based on the results of the 2046 high-density scenario, Tewin can be accommodated with the transportation infrastructure recommended in the 2046 Transportation Master Plan. The 15-minute community structure, the mobility spine with the frequent and concentrated transit service, and short walking distances to transit, means that Tewin will produce less auto trips overall, using the "Decide and Provide" approach and TIMM design principles, such as reliable and desirable transit service and active transportation facilities.

Tewin's 15-minute community design enables origins and destinations to be connected by sustainable modes that include transit, walking and cycling, particularly to access the regional transit network (both BRT and LRT systems). Tewin is structured around a Mobility Spine, which will provide a highly Equitable Transit solution that is accessible, capital and operationally cost-effective, available to the entire community, frequent and reliable (with approximately 4-minute combined headways). In 2046, the transit service considered in the Tewin Transit Strategy has available capacity and can continue to grow ridership with no additional infrastructure investments.

The resulting modal shares derived from the 2046 TRANS EMME modelling exercise for Tewin are illustrated in Figure 24 below.

*Figure 24: Projected Tewin Mode Share of High-Density Scenario*

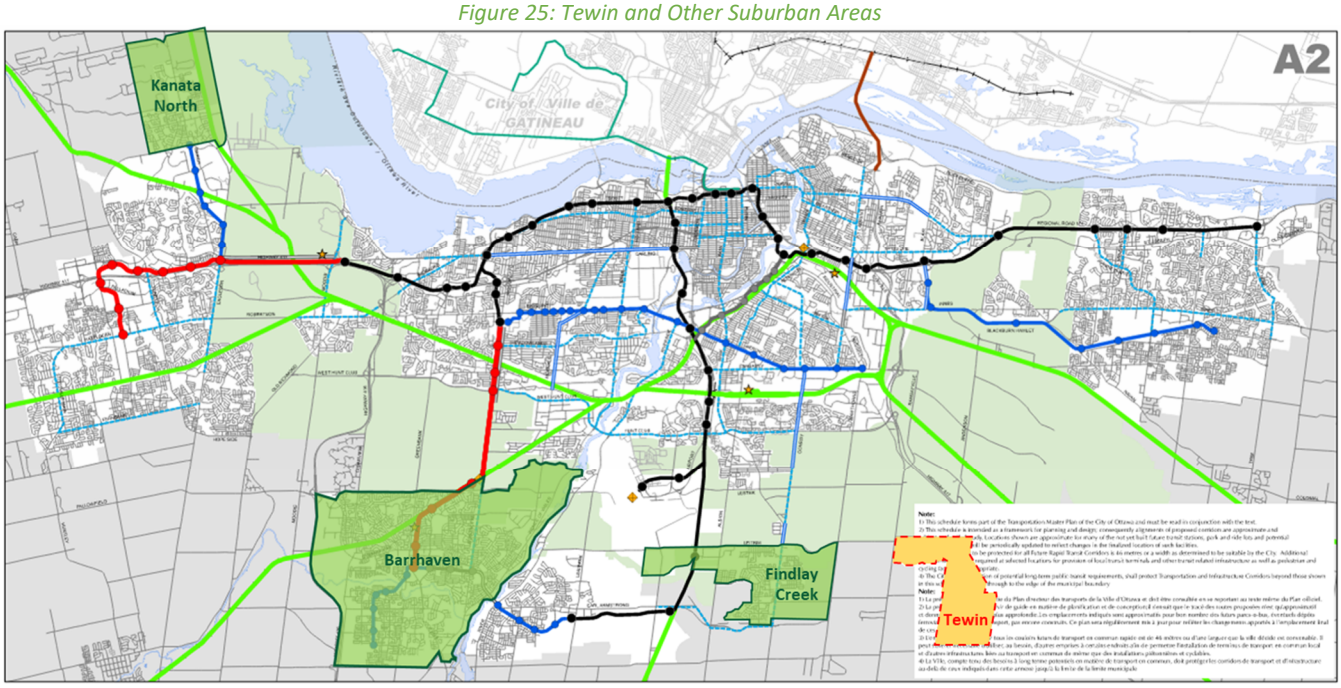



While the "Decide and Provide" and TIMM design approach produce good sustainable mode share results, it is understood that the 2046 TRANS EMME model does not capture the benefits of Tewin's 15-minutes design, e.g., walk trips are not captured in the model as shown in Figure 24.

Given the existing roadway network capacity and proximity to Highway 417, the model projects that many regional trips will be made by car. To understand and compare Tewin to other areas of the City, communities with comparable distances to the downtown core such as Kanata, Barrhaven, and Findlay Creek have been considered to identify potential constraints and limitations. Figure 25 graphically demonstrates the location of these areas in the City of Ottawa.

- While some communities are now being retrofitted with a centralized transit facility, given the legacy land use pattern and the fact that these corridors remain critical for both buses and cars, these communities are still very limited in its ability to evolve as a 15-minute community. Their legacy-built form creates a scattered bus route service which is more susceptible to reliability issues. As a result, though it may produce similar trips by population, these communities have higher transit capital and operating costs, as compared to Tewin.
- In many of the existing communities, transit headways need to be much more frequent with a scattered bus routing to reach all areas of the community. Therefore, these communities may sometimes operate with a higher transit mode split, but this is based on less efficient and more costly transit service than Tewin, which is especially important to consider given current city-wide transit service constraints.
- Some communities reflect a traditional suburban planning approach. The overall transit trips per population in these communities may be similar to Tewin, however given the development pattern and scattered bus routes, the total buses required per hour may be upwards of five times that of Tewin, which results in higher operating costs and still may produce a smaller internal transit modal share. Should Tewin grow beyond the area and population currently projected, it will do so with a development designed to be more sustainable and efficient than the legacy suburban areas of the City.

*Figure 25: Tewin and Other Suburban Areas*




Considering the above, Table 3 below shows the projected combined bus service coverage of Tewin compared with a set of representative snapshots within other Ottawa communities. The comparison shows a strong transit coverage per household in Tewin, demonstrating that the "Decide and Provide" and TIMM approaches successfully enable Tewin to be the most transit-oriented suburban community in Ottawa.

*Table 3: Projected Combined Transit Coverage High Density Scenario*

| Community | Total Outbound Buses per Hour | Household Coverage per Hour per Bus | Population Coverage per Hour per Bus |
|---|---|---|---|
| **Tewin** | **14** | **1186** | **2927** |
| **Kanata North** | 15 | 466 | 1397 |
| **Findlay Creek** | 25 | 284 | 827 |
| **Barrhaven** | 70 | 608 | 1753 |

The detailed modelling methodology and comparison with other Ottawa communities are included in the appended modelling memos.

## 8.4 Early Transit Servicing Strategy

Tewin's commitment to sustainable, transit-oriented development begins on day one. To ensure that residents have immediate access to reliable public transportation, the initial transit service is planned to focus on Desire Line 1, the corridor connecting Tewin to Greenboro and South Keys Stations. This route is prioritized for early implementation due to several strategic advantage es:

- **Shortest and Most Direct Connection:** Among the identified preferred desire lines, the Greenboro/South Keys route offers the most direct path from Tewin to the existing O-Train network, facilitating efficient travel times for early residents.
- **Access to Established Amenities:** South Keys Shopping Centre, adjacent to these stations, hosts a variety of essential services and retail options, including:
    - Grocery stores

  - Pharmacies
  - Retail outlets
  - Dining options
  - Entertainment
  - Fitness facilities

  This array of services ensures that early Tewin residents have immediate access to daily necessities and lifestyle amenities, even before local commercial developments within Tewin are established.
- **Strategic Transit Hubs:** Both Greenboro and South Keys Stations are integral parts of Ottawa's transit network. Greenboro Station offers park-and-ride facilities and connects to various bus routes, while South Keys Station serves as a transfer point between Line 2 (Trillium Line) and the Airport Link (Line 4), providing direct access to the Ottawa International Airport.

As mentioned previously, Tewin is structured around a Mobility Spine, which will provide a highly Equitable Transit solution that is accessible, cost-effective, available to the entire community, frequent and reliable (with approximately 4-minute combined headways). In 2046, the transit service considered in the Tewin Transit Strategy has available capacity and can continue to grow ridership with no additional infrastructure investments.

By initiating transit service along this corridor from the outset, Tewin ensures that residents have an immediate alternative to driving. Public transit will be available from day one to support commuting, shopping, and access to essential services, reinforcing Tewin's vision of a sustainable, transit-first community. Early integration with major transit hubs such as Greenboro and South Keys also enables seamless connectivity to the broader city-wide transit network, expanding mobility options and aligning with Ottawa's long-term transportation objectives. This early transit servicing strategy underscores Tewin's commitment to creating a connected, accessible, and sustainable community from its outset. Details regarding Tewin's financial role in supporting early transit and the anticipated phase out of financial support are provided in the Tewin Financial Implementation Plan (under separate cover).

# 9 Regional Auto Network Integration Strategy

The City of Ottawa's 2025 Transportation Master Plan (TMP) includes a city-wide assessment of road network needs to support population and employment growth across several emerging communities, including Tewin. In addition to serving as a long-range policy framework, it also fulfills Phases 1 and 2 of the Municipal Class Environmental Assessment (MCEA) process for city-wide road infrastructure, identifying the transportation problems and opportunities and evaluating alternative solutions. The TMP outlines both a Needs-Based Road Network and a more focused Priority Road Network, which identify infrastructure improvements necessary to accommodate projected travel demand while advancing the City's sustainable transportation goals.

As described in Section 4.3 of this report, the City's Road Network Development process applied a refined, policy-aligned methodology that prioritized transit investments before assessing where additional road capacity might still be justified. Road projects were only carried forward if they addressed significant capacity deficiencies or were required to supported new growth areas, while also avoiding conflict with broader policy directions and environmental constraints.

This section builds on that framework by assessing how Tewin fits into the regional auto network as envisioned in the TMP. While the TMP assumed a population of 16,000 for Tewin based on conservative minimum densities rooted in traditional suburban planning, the Community Design Plan (CDP) supports a higher population of 40,900. To evaluate whether the City's proposed road network remains sufficient under this anticipated increased growth scenario, Tewin's transportation team used the City's regional TRANS EMME model to test future road capacity conditions at full build-out.

In addition to validating network capacity, this section also explores regional roadway realignment options, specifically, concession road jogs adjacent to the Tewin boundary. While these are regional matters, their design and function influence land use, connectivity and protection for future transportation needs for the broader southeast Ottawa area and are therefore considered in the CDP.

## 9.1 Proposed City-Wide Road Network

The City of Ottawa's 2025 Transportation Master Plan (TMP) projects an increase in daily travel demand by 2046, driven by long-term population and employment growth across the city. In keeping with the City's "Transit First" policy, the TMP focuses on maximizing sustainable transportation options before identifying where limited road improvements may still be justified.

As detailed in Section 4.3, the City applied a clear screening framework to evaluate road infrastructure needs only after optimizing for transit. Road projects were carried forward into the long-range network only if they met specific criteria, including:

- Addressing constrained screenlines or localized congestion;
- Supporting access to new development areas; and
- Aligning with Official Plan policies and environmental constraints.

This two-step process resulted in the identification of:

- **A Needs-Based Road Network**, which includes all projects identified to support forecasted auto demand across the city, and
- **A refined Priority Road Network**, which identifies the most strategic, cost-effective, and policy-aligned projects expected to move forward.

While the Needs-Based Network provides useful context for long-term planning, the Priority Road Network reflects the City's implementation focus through 2046.

Figure 26 and Figure 27 illustrate the Needs-Based and Priority Road Networks, respectively, as developed in the City's 2025 Road Network Development Report.

*Figure 26: Needs-Based Road Network*

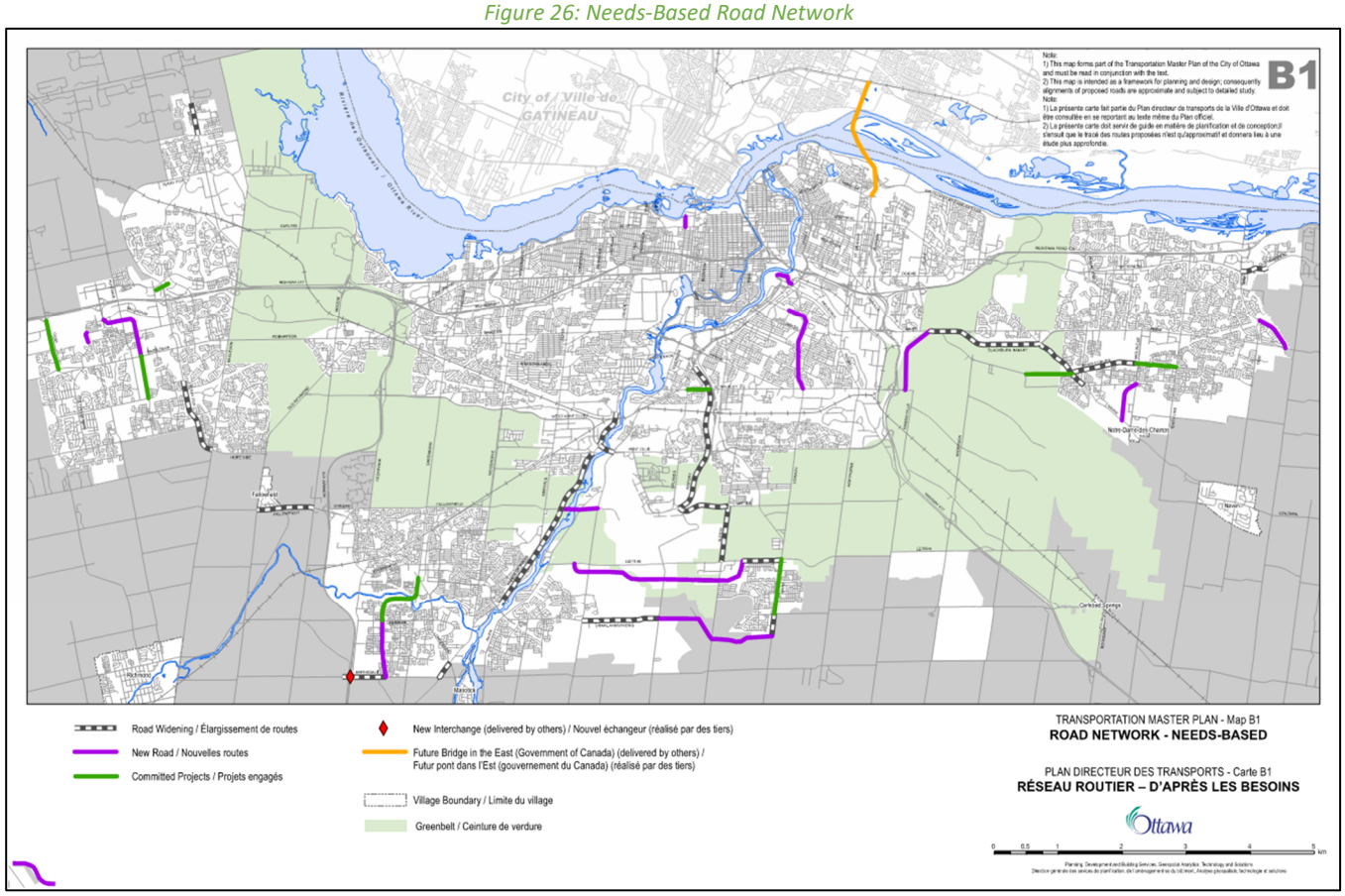
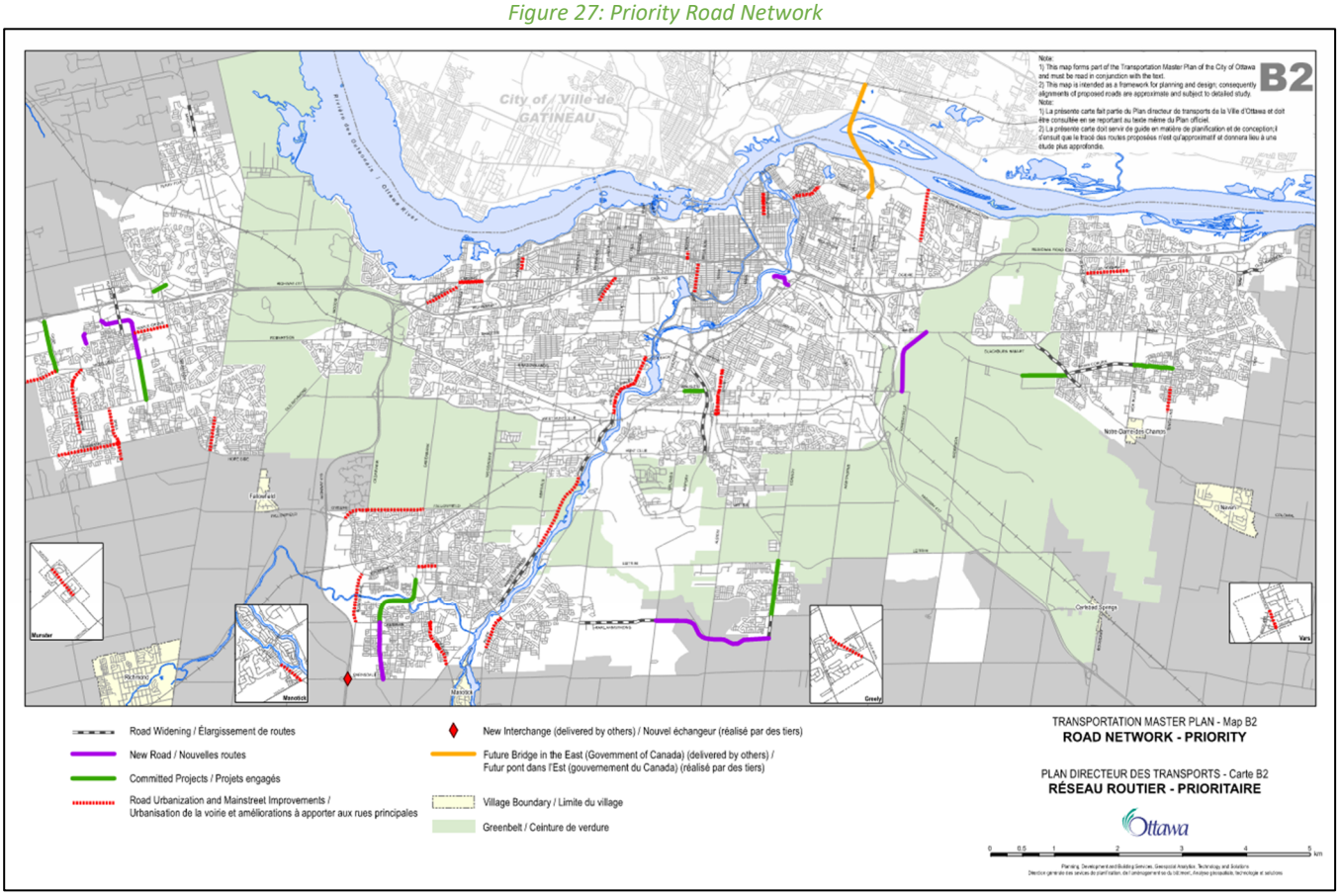


*Figure 27: Priority Road Network*




## 9.2 City Model Results and TMP Conclusions

The 2025 TMP assumes a population of approximately 16,000 residents for the Tewin area, based on early planning estimates. However, the Tewin Community Design Plan (CDP) forecasts a higher density projection of approximately 40,900 residents, based on refined land use and housing scenarios. To assess whether the City's Priority Road Network remains sufficient under this higher-growth condition, Tewin's transportation team used the City-provided EMME model to simulate future travel demand.

The analysis evaluated volume-to-capacity (V/C) ratios on the surrounding regional road network, using a threshold of 1.0 to identify segments potentially requiring further investigation. The City model shows that segments in and around Tewin remained below this threshold, with the exception of the Anderson Road segment between the Mobility Spine and the south ramps of Highway 417.

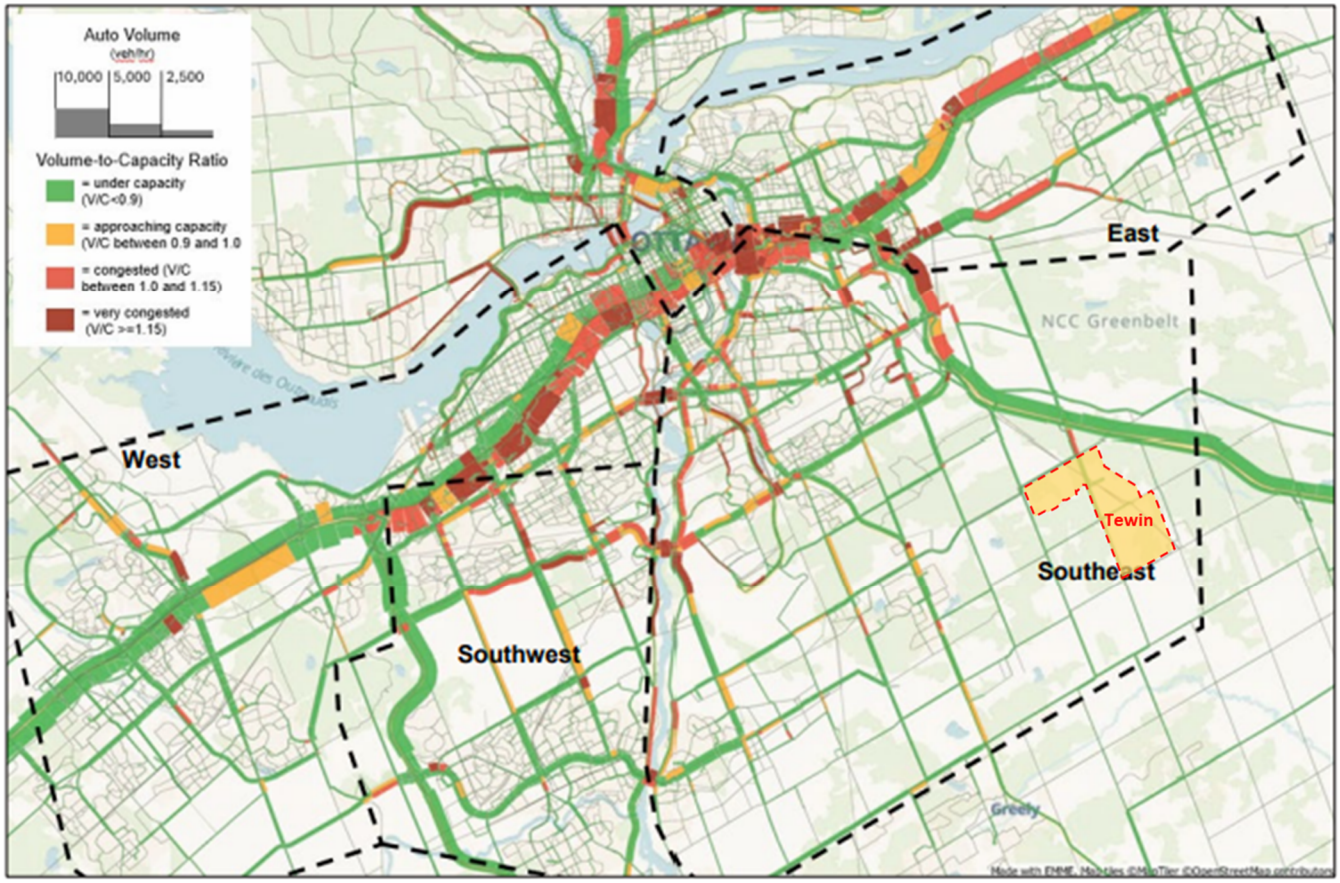
This finding prompted the transportation planning team to revisit the criteria outlined in the City's Road Network Development Report, which guided the inclusion and exclusion of road projects in the TMP. EMME modelling testing showed that although localized improvements might occur, the added capacity would shift congestion downstream toward constrained highway segments and interchanges without significant infrastructure changes along the full corridor. This outcome mirrors cases in the TMP where the City chose not to carry forward widenings that created bottlenecks further along the system.

Applying a consistent methodology, the widening of Anderson Road was not recommended for segments outside of Tewin. Additionally, retaining the current configuration aligns with Tewin's sustainability objectives by avoiding induced auto demand, supporting multimodal travel patterns, and preventing potential impacts on the Greenbelt

between Leitrim Road and Highway 417. Localized, corridor-level improvements, such as intersections modifications at Anderson Road and Leitrim Road, coordinated signalization or other intersection-level improvements including at Highway 417 interchanges will be required, and other improvements can be explored during implementation and monitoring to support efficient traffic flow without compromising broader sustainability objectives.

The results of the EMME modelling analysis, including V/C mapping under the high-density scenario, are illustrated in Figure 28. Based on this analysis and the application of the City's established road network evaluation methodology, no modifications to the City's Priority Road Network are warranted to accommodate full build-out of the Tewin community at either the TMP population projection or the anticipated Tewin CDP population projection. As such, the findings confirm that the City's 2025 TMP remains sufficient and valid for Tewin's projected growth horizon. Accordingly, no updates to Phases 1 and 2 of the Municipal Class Environmental Assessment (EA) process are required, and no addendum to the TMP is needed at this time.

*Figure 28: TMP EMME 2046 Auto Volume-to-Capacity Ratios (AM Peak Hour, 16,000 Official Plan Base Case Scenario)*




### 9.2.1 EMME Model Gaps

While the TRANS EMME model is a valuable regional-planning tool, it is based in a classic 'Predict-and-Provide' paradigm: future trip tables, car-ownership rates, and mode choices are generated by projecting historic behaviour from broadly comparable parts of the city. In the case of Tewin, this means that many of the factors intentionally designed to shift behaviour, including an extensive winter-maintained AT network, prevalent 400 m walk access to the Mobility Spine, early deployment of transit signal priority, and compact mixed-use blocks, are

largely invisible to the model. Three structural limitations are particularly relevant: behavioural inertia, spatial aggregation, and active transportation modes.

The behavioural inertia of the past development patterns is expected to affect the mode share projections. As car-ownership and mode-share coefficients are calibrated on past suburban travel patterns, the EMME model carries an assumption that residents' behaviour and travel choices will be the same for future developments as in the past. Given Tewin's land use form incorporates the concept of 15-minute community, high quality active transportation network, and strong transit coverage, the mode share projection of Tewin is expected to be less car-oriented than the EMME model projection.

The entire community is represented by only three traffic analysis zones in the EMME model, and as a result, the fine-grained permeability of the complete Tewin network and the proximity of high-density developments along the Mobility Spine is not captured in the EMME model. Additionally, since the EMME model assigns only motorized and transit trips, the large volume of short walk trips expected within a 15-minute neighbourhood are not captured in the forecast.

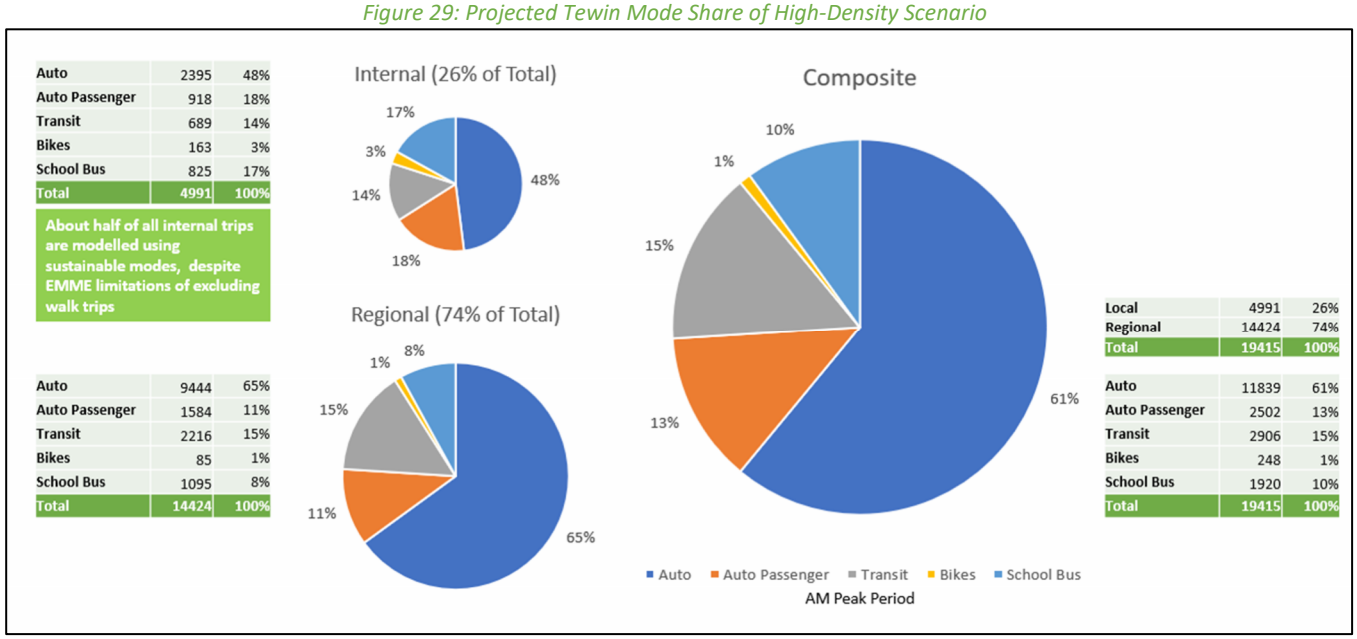
Recognizing these constraints is essential to interpreting the model results. Tewin's mobility strategy presents a fundamentally different trajectory for suburban travel behaviour, one that more closely mirrors inside Greenbelt neighbourhood structures and cannot be fully captured by traditional forecasting tools rooted in historical patterns. While models like those in EMME offer a baseline grounded in past travel behaviour and is the best available model at this time, they are not designed to reflect the transformative outcomes that result from intentional, integrated community design. With a strong employment base, a centrally located Mobility Spine, complete walking and cycling networks, and early transit service from day one, Tewin is structured to support at least half of all trips occurring within the community as non-auto mode.

Over time, a growing share of regional trips is expected to shift to transit as service levels increase and car dependence diminishes. The remaining auto demand can be accommodated by the planned road network without requiring additional capacity. These outcomes reflect a deliberate shift away from conventional assumptions and toward a planning model that chooses the future it wants to achieve. Viewed through a decide-and-provide lens, Tewin is purposefully designed to be compatible with Ottawa's long-range mobility objectives.

## 9.3 Tewin's Mode Share Projections

As part of the regional transportation planning process, the City's TRANS 2046 EMME model was updated to include the high-density scenario with a population of 40,900. This updated model scenario provides preliminary insight into both local (internal) and regional (external) travel behaviour under a city-wide horizon year. According to the model results, approximately 26% of trips generated by Tewin remain internal to the community, while the remaining 74% are external. For external travel, the mode share is distributed as approximately 65% auto, 15% transit, and 9% other sustainable modes. Figure 29 below summarizes the preliminary mode share results for both internal and external trips based on the peak hour data derived from EMME.

*Figure 29: Projected Tewin Mode Share of High-Density Scenario*




However, the TRANS model, similar to the underlying EMME platform, does not account for walk-only trips as described in Section 9.2.1. The limitation is particularly relevant in 15-minute communities like Tewin, where its 'Decide-and-Provide' approach is expected to result in a significant share of daily activity to occur on foot similar to inside Greenbelt areas with high level of access to amenities and services. Figure 30 below shows the 15-minute neighbourhoods in inner urban area of Ottawa as per the TMP, and Figure 31 below shows the mode share projections according to the Transportation Trends Report prepared for the City of Ottawa in 2024.

*Figure 30: City of Ottawa 15-Minute Neighbourhoods*

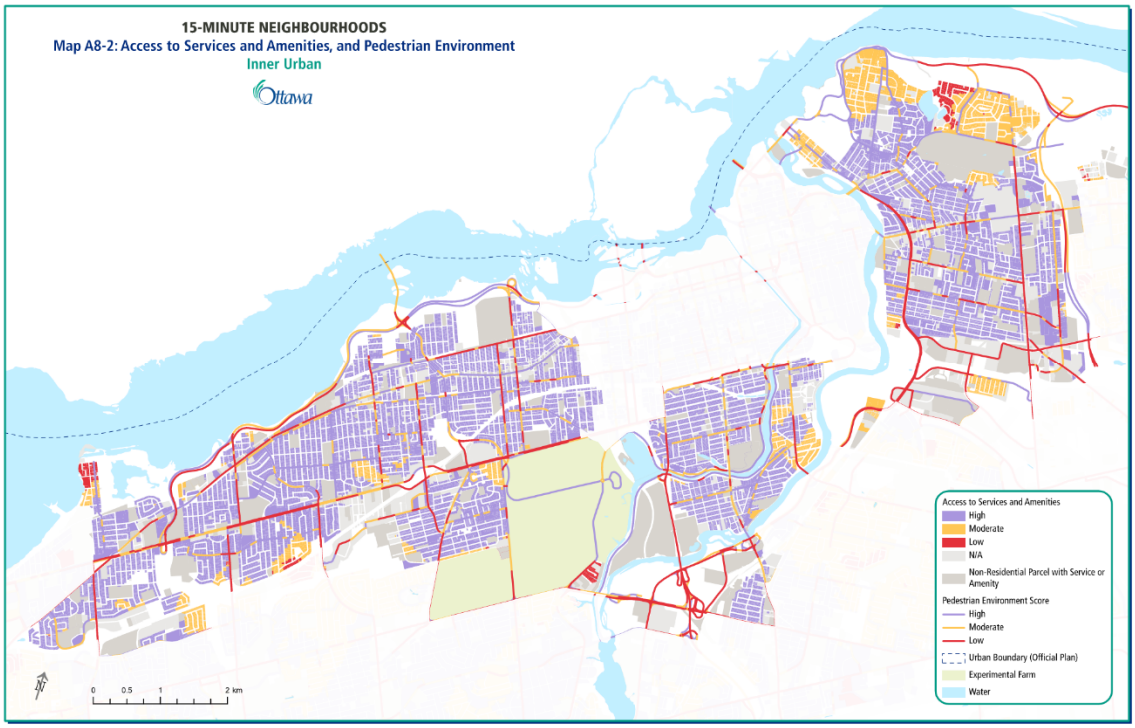
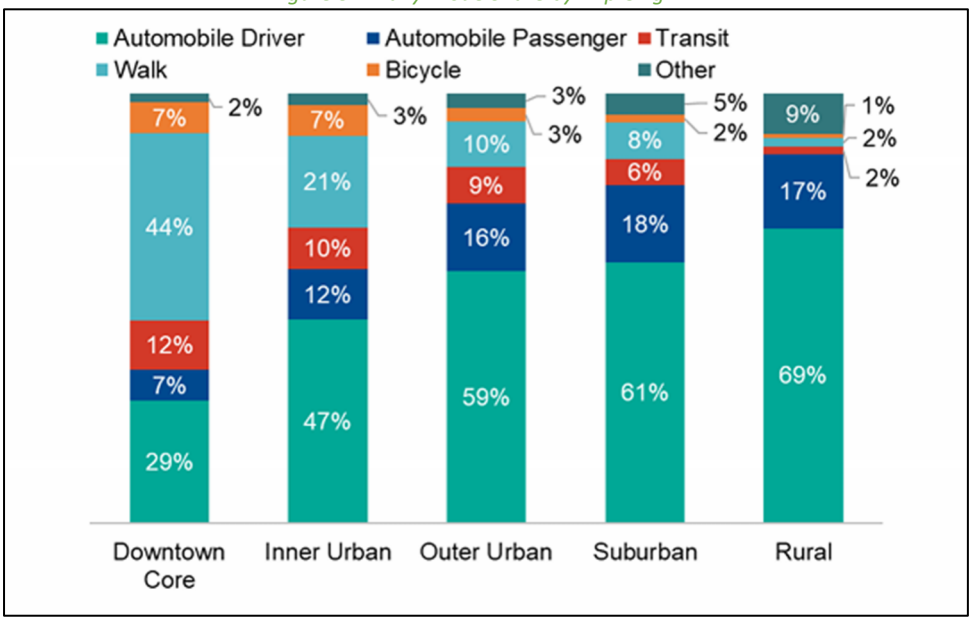
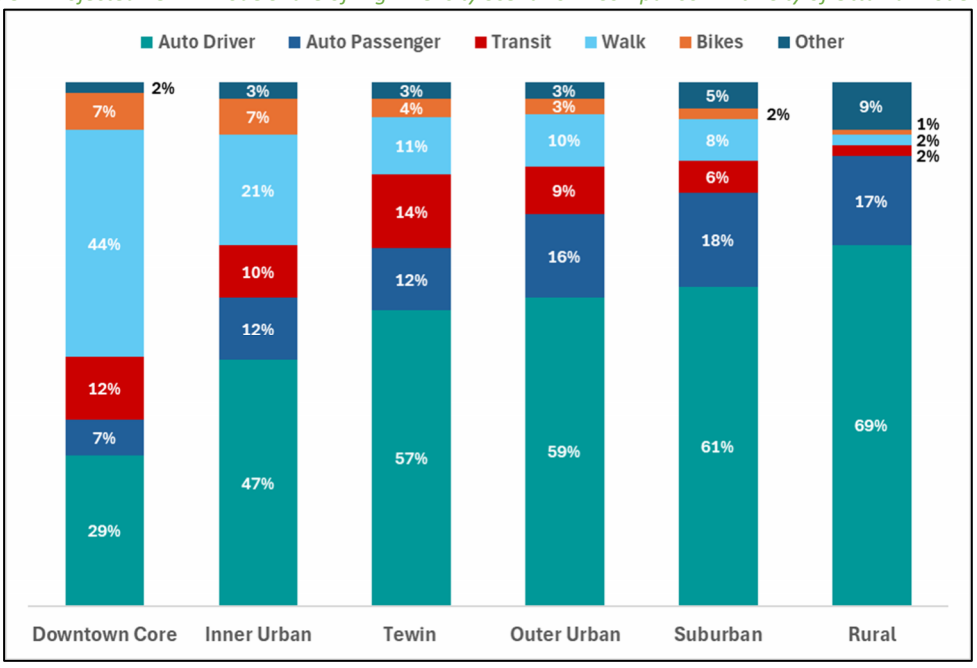


*Figure 31: Daily Mode Share by Trip Origin[25]*




Guided by the mode share projections from the City's data for its various transects, Tewin's mode shares has been adjusted to incorporate walk trips. Figure 32 below illustrates the composite mode shares of Tewin compared to the other areas of the City.

*Figure 32: Projected Tewin Mode Share of High-Density Scenario in Comparison with City of Ottawa Mode Share*




The lower composite auto share of roughly 57%, meanwhile, confirms that the future road network can absorb outbound vehicle demand without additional widenings beyond those identified in Section 9.2. This places Tewin

[25] From City of Ottawa Transportation Trends Report: Highlights, Exhibit 7

at a competitive position on track of meeting the TMP objective of having sustainable mode share of 48% city-wide mentioned earlier in the report.

At the same time, the result reinforces the importance of launching viable regional transit on day one, enabling travel behaviour to shift naturally toward higher-capacity modes as city-wide growth places greater pressure on limited road space. Tewin's density, grid structure, and protected transit corridor along the Mobility Spine provide that exact flexibility. Over time, Tewin's "Decide-and-Provide" approach allows the community to exceed the conservative mode-share figures reported here while remaining aligned with Official Plan targets for climate and sustainable mobility.

## 9.4 Concession Roadway Realignments

As part of the broader regional integration strategy, several locations along Leitrim Road, Anderson Road, and Farmer's Way were considered for potential future intersection-level improvements to address existing jogs and misalignments. These improvements were considered as part of the Tewin mobility strategy to ensure that Tewin's design preserves for such interventions, to enhance corridor continuity and support long-term multimodal mobility across southeast Ottawa as the region grows. Realignments were not modelled in EMME, and this assessment was done separately, as EMME is a macroscopic tool.

Intersection improvements to address the existing jogs/misalignments have the potential to influence land use patterns and block structure within the Study Area, depending on which alignment is ultimately selected. As such, it was important for the CDP to proactively evaluate these options and ensure that internal planning and road layouts remain compatible with potential future regional road configurations. The detailed analysis and evaluation of realignment options, including the identification of preferred alignments, is provided in Sections 9.4.1 through 9.4.4.

As community area demonstration planning and Planning Act approvals (e.g. Draft Plan of Subdivision applications) are advanced in the Secondary Plan area, these realignments are to continue to be considered and incorporated into detailed planning and design activities, including confirming timing and delivery through typical City processes.

### 9.4.1 Leitrim Road Realignment

Leitrim Road currently consists of disjointed segments in the vicinity of Ramsayville Road, creating discontinuities around the perimeter of the Tewin area. Given the anticipated urbanization of the lands surrounding Tewin, a realignment of Leitrim Road may be required to better integrate the regional transportation network and support future urban growth. Five realignment options were considered:

- **Option 1:** Realigns Leitrim Road within the Tewin study area boundary.
- **Option 2:** Realigns Leitrim Road within the Greenbelt, avoiding impacts to the Tewin boundary area.
- **Option 3:** Prioritizes vehicle flow from the Community Spine to and from the north.
- **Option 4:** Introduces a peanut-shaped roundabout at Leitrim Road and Ramsayville Road, utilizing the existing alignments.
- **Option 5:** Proposes a larger roundabout, also connecting Leitrim Road and Ramsayville Road, but designed to accommodate a direct transit route through the roundabout.

All alignment options are illustrated in Figure 33, with a summary of the evaluation results also provided in that table. The orange segments represent the Mobility Spine. Detailed analysis and justification for each option's ranking are included in Appendix C.

*Figure 33: Leitrim Road Realignment Options*

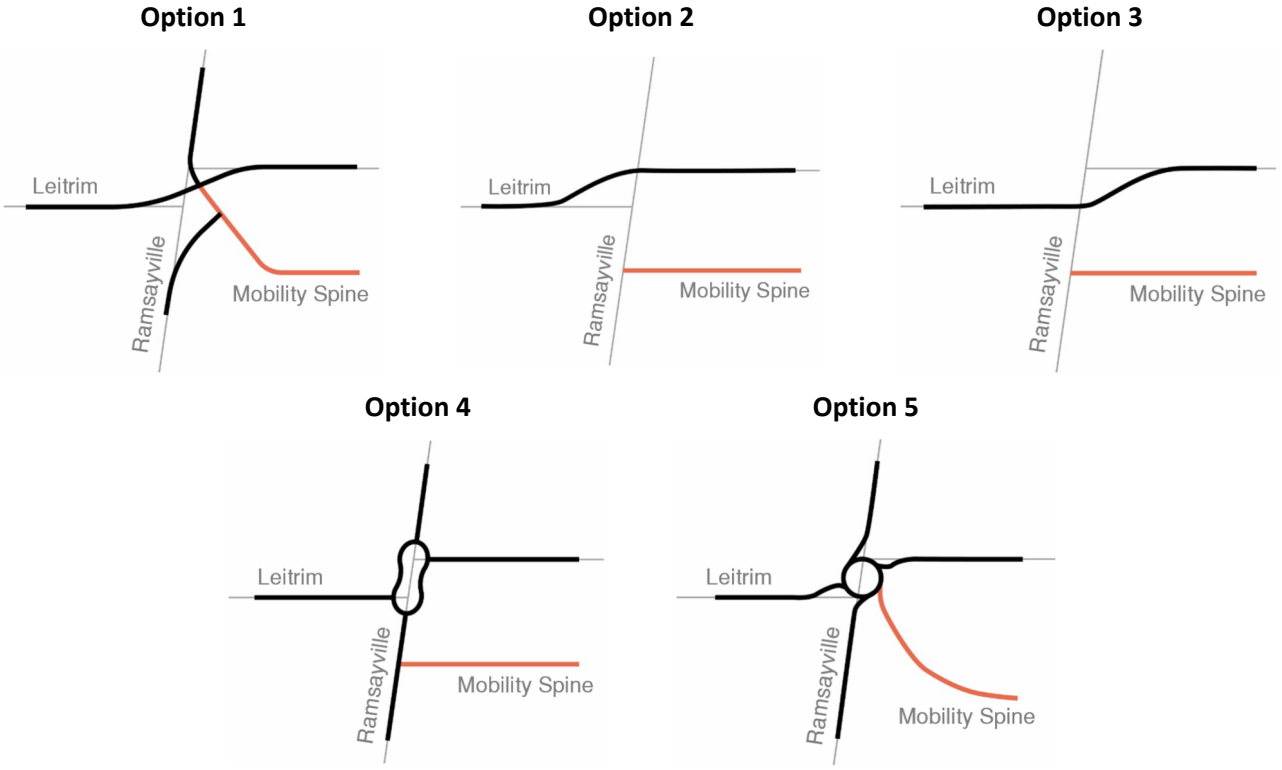



*Table 4: Leitrim Road Realignment Evaluation Summary*

| Category | Option 1 | Option 2 | Option 3 | Option 4 | Option 5 |
|---|---|---|---|---|---|
| Development & Land Use | | | | | |
| Transportation & Mobility | | | | | |
| Natural System, Parks, Recreation & Open Spaces | | | | | |
| Servicing | | | | | |
| Phasing & Implementation | | | | | |

Option 1 was ruled out due to large impacts on natural area and land use. Additionally, this alignment disrupts the continuity of the Ramsayville Road, making it unfavourable to north-south regional traffic using Ramsayville Road. Option 2 was ruled out because it has the largest impact on the Greenbelt. Option 4 and 5 were ruled out due to impacts on the Greenbelt and land use.

The assessment found that Option 3 is the most optimized solution. The option minimizes impacts on the Greenbelt, improves connections to the street network, and supports the development of mixed-use neighbourhoods. Additionally, this option most closely resembles a grid network, which is preferred from a perspective of enhancing multimodal connectivity. Moreover, this option is expected to have minimal impact on natural systems and servicing, with moderate implementation cost presented at Public Meeting #3.

As such, the CDP has carried this potential alignment forward in the land use plans, in order to earmark space should a corridor-wide study be initiated in the future to confirm final alignment and design details.

### 9.4.2 Anderson Road at Piperville Road Realignment

In its current form, Anderson Road consists of disjointed segments near Piperville Road, resulting in discontinuities around the perimeter of the Tewin area. With the anticipated urbanization of adjacent lands, a realignment of Anderson Road may be needed to ensure network continuity and to support the efficient integration of future development. Two realignment options were considered:

- **Option 1:** Realigns Anderson Road within the Tewin study area boundary, potentially integrating more closely with internal development patterns.
- **Option 2:** Realigns Anderson Road outside the Tewin study area, reducing potential land use and environmental impacts within the community boundary.

All alignment options are illustrated in Figure 34, with a summary of the evaluation results also provided in that table. Detailed analysis and rationale for the rankings of each option are included in Appendix C.

*Figure 34: Anderson Road at Piperville Road Realignment Options*


*Table 5: Anderson Road at Piperville Road Realignment Evaluation Summary*

| Category | Option 1 | Option 2 |
|---|---|---|
| Development & Land Use | | |
| Transportation & Mobility | | |
| Natural System, Parks, Recreation & Open Spaces | | |
| Servicing | | |
| Phasing & Implementation | | |

The assessment found that Option 1 is the most optimized solution. Although the two options perform similarly under most of the criteria, Option 1 allows the new alignment to remain largely on Tewin-owned land, thus creating less burden on land use and implementation. On the other hand, Option 2 mostly affects the land use outside of Tewin boundary, with impacts to private lots, thus creating more uncertainty and potentially higher costs of implementation. As such, the CDP has carried the Option 1 alignment forward in the land use plans.

### 9.4.3 Farmer's Way Realignment

Farmer's Way currently contains disjointed segments near Thunder Road, creating discontinuity along the perimeter of the Tewin area. With the expected urbanization of adjacent lands, a realignment of Farmer's Way is required to enhance network cohesion and support the integration of future development. Four realignment options were considered:

- **Option 1:** Realigns Farmer's Way within the Tewin study area boundary.

- **Option 2:** Realigns the road partially within the study area boundary and partially through the wooded area located southeast of Tewin.
- **Option 3**: Realigns Farmer's Way entirely through the wooded area to the southeast, outside the study area boundary.
- **Option 4:** Proposes a roundabout at the intersection of Farmer's Way and Thunder Road, utilizing the existing alignments.

All alignment options are illustrated in Figure 35, with a summary of the evaluation results also provided in that table. Detailed analysis and justification for each option's ranking are included in Appendix C.

*Figure 35: Farmer's Way Realignment Options*

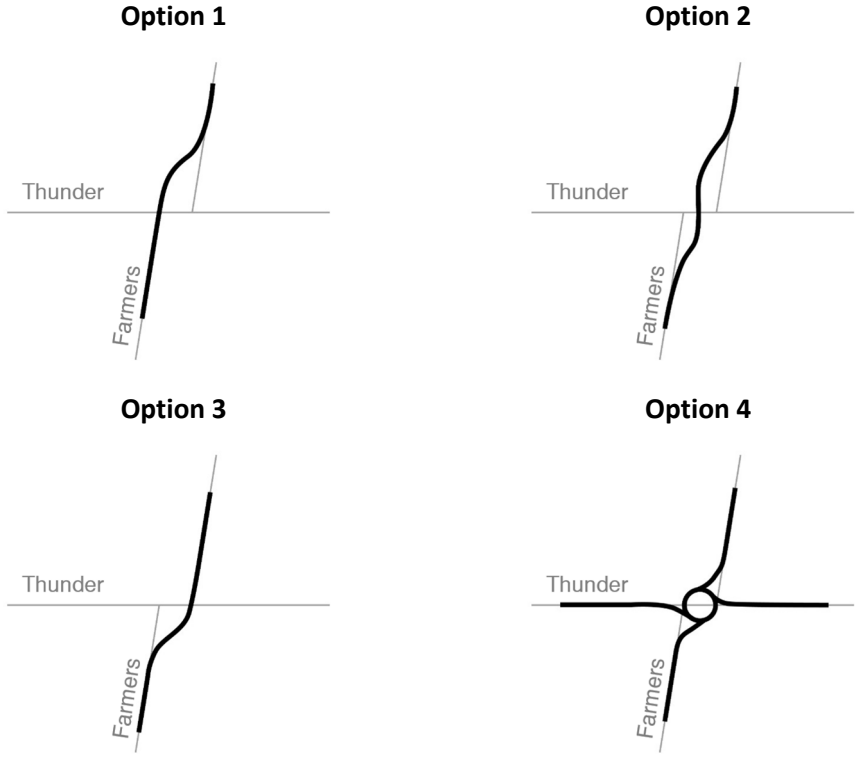



*Table 6: Farmer's Way Realignment Evaluation Summary*

| Category | Option 1 | Option 2 | Option 3 | Option 4 |
|---|---|---|---|---|
| Development & Land Use | | | | |
| Transportation & Mobility | | | | |
| Natural System, Parks, Recreation & Open Spaces | | | | |
| Servicing | | | | |
| Phasing & Implementation | | | | |

Option 1 was ruled out due to its impacts on the existing property and the ability to create a mixed-use node at this intersection. Option 3 has similar drawbacks, with the addition of large impacts on a wooded area in the southeast quadrant. Option 4 demonstrates the largest impacts on both the wooded area and the existing properties and, therefore, was also ruled out from further consideration.

The assessment found that Option 2 is the most optimal solution. This option minimizes impacts on existing and future land uses and thus creates less hindrance to implementation. Moreover, this option is expected to have a low impact on natural systems and servicing, and the lowest implementation costs amongst all options.

### 9.4.4 Anderson Road (at Thunder Road) Realignment

Anderson Road is currently disconnected near its intersection with Thunder Road, resulting in a break in continuity along the edge of the Tewin area. With adjacent lands expected to urbanize, a realignment of Anderson Road is required to ensure a well-connected regional road network and support future growth. Two realignment options were considered, both of which are located outside the Tewin study area boundary:

- **Option 1:** Shifts the alignment impacting the northeast quadrant of the existing intersection
- **Option 2:** Shifts the alignment impacting the southwest quadrant of the existing intersection

All alignment options are illustrated in Figure 36, and summarized in Table 9 below. Detailed analysis and justification for the evaluation of each option are included in Appendix C.

*Figure 36: Anderson Road (at Thunder Road) Realignment Options*

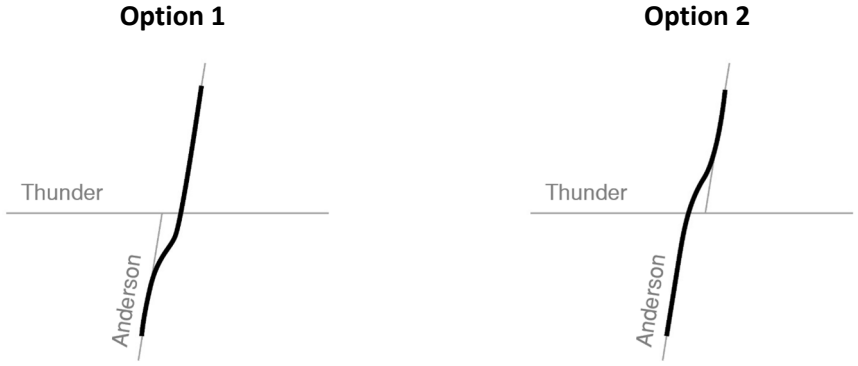



*Table 7: Anderson Road (at Thunder Road) Realignment Evaluation Summary*

| Category | Option 1 | Option 2 |
|---|---|---|
| Development & Land Use | ◔ | ◔ |
| Transportation & Mobility | ● | ● |
| Natural System, Parks, Recreation & Open Spaces | ● | ● |
| Servicing | ● | ● |
| Phasing & Implementation | ● | ● |

As shown in the evaluation summary, both options do not impact the northeast quadrant (Tewin CDP area), and as a result, no land use plan adjustments are required to accommodate this intersection realignment.

## 9.5 Vehicle Kilometre Travelled and Greenhouse Gases

Vehicle Kilometre Travelled (VKT) was analyzed to project the Greenhouse Gas (GHG) emissions and to help with sustainability benchmarking for the Tewin transportation system. The values in Table 8 are generated directly from the EMME model and do not replicate the City's methodology for calculating performance metrics in other applications, such as the 2024 Development Charge Background Study. The key value of this analysis lies in the "Change" and "% Change" columns since these values are internally consistent and reliably show the relative performance between the scenarios modelled.

*Table 8: Vehicle Kilometre Travelled (VKT) Analysis Results*

| | | Do Nothing vs. 41k Scenario | | |
|---|---|---|---|---|
| | **2046** *Do Nothing* | **2046** *41k Scenario* | **Change** | **% Change** |
| **Vehicle Kilometres*** | 3,206,061 | 3,244,581 | 38,520.00 | 1.20% |
| **Vehicle Hours*** | 69,054 | 70,722 | 1,667.20 | 2.41% |
| **Average Speed (km/h)*** | 37.11 | 36.93 | -0.18 | -0.49% |
| **Average Trip Distance (km)** | 12.70 | 12.69 | -0.01 | -0.07% |
| **Average Trip time (min)** | 20.54 | 20.62 | 0.08 | 0.41% |

*Direct output from EMME

The analysis indicates that inclusion of Tewin in the regional transportation network results in a modest increase in regional vehicle travel. Under the high-density scenario (40,900 residents), the model forecasted a 1.20% increase in total VKT and a 2.41% increase in vehicle hours compared to the 2046 "Do Nothing" baseline. This relatively small increase, despite the significant population growth, can be attributed to Tewin's 15-minute community design, which is structured to capture a high proportion of trips internally via walking, cycling, and transit. The model also shows a negligible change in average trip distance and a slight decrease in average speed (-0.49%).

The regional model demonstrates that new trips from Tewin are accommodated with minimal impact on system-wide operations, and that the transportation network can accommodate growth while maintaining system-wide efficiency, which confirms the effectiveness of the community's internal multi-modal design in managing regional travel demand.

To understand the impact of VKT on Greenhouse Gases, the general approach applied in the City's TMP, and the Climate Change Master Plan Progress Report (2023) involves a fuel efficiency-based methodology which integrates the projected Vehicle Kilometres Travelled (VKT) and vehicle hours from the EMME model along with key parameters such as the length of modelled road links, prevailing vehicle fleet fuel efficiency standards, and official tailpipe emission factors by fuel type (e.g., gasoline, diesel). This approach creates a direct link between transportation demand forecasts and their associated environmental impact.

Currently, Tewin is expected to generate similar AM Peak Hour Emissions as South Gloucester/Leitrim, at 0.222 CO2e per the City's TMP analysis, compared to the higher city-wide average of 0.256 CO2e (kg/VKT). The forecast is lower than other suburban neighbourhoods in Ottawa, notably Orleans (0.285 CO2e) and Kanata/Stittsville (0.255 CO2e). Applying the 0.222/CO2e rate to the Tewin auto VKT of 38,250 km will give a GHG emission estimate for Tewin of 8,492 kg CO2e.

It is noted that a majority of regional trips from Tewin destined to downtown Ottawa may likely have lower GHG emissions compared to regional trips from other urban growth areas since the Tewin trips have shorter and faster travel times. These preliminary findings may be further explored through GHG quantitative analysis conducted using the City's GHG Emissions Tool and methodology, if required.

# 10 Tewin Recommended Transportation Plan

Informed by the regional transportation network analyses described in Sections 8 and 9, this section summarizes the recommended transportation solution for Tewin, supported by local-level analysis as well as the southeast sector examination, and the resulting recommended transportation projects list.

## 10.1 Tewin Transportation Integration

As discussed in Sections 8 and 9, Ottawa's updated Transportation Master Plan (TMP) establishes an approach that prioritizes transit development to support sustainable mode share and reduce car dependency in the long term. The TMP identifies the Priority Transit and Needs-based Networks to guide the phased implementation of transit improvements across the city.

Building on such a framework, Tewin's Regional Transit Integration Strategy evaluated four conceptual transit corridors that could efficiently connect the new community to O-Train Lines 1 and 2. After assessing travel demands, popular destinations, and TMP directions, the preferred connections to Greenboro/South Keys Station and Hurdman Station were identified as the recommended long-term options. These routes leverage existing and planned transit priority corridors and major transfer hubs to ensure reliable and transit access to jobs, services, and destinations across Ottawa.

Macro-level transit modelling using the City's 2046 assumptions also confirmed that Tewin's 15-minute community structure will support high internal trip capture, efficient transit operations, and lower infrastructure costs compared to legacy suburban areas. Early transit service will launch along the Leitrim corridor to Greenboro/South Keys to give first residents immediate access to rapid transit, and key amenities, and reinforce Tewin's commitment to equitable, sustainable mobility from day one.

Similar to the transit network, Ottawa's 2025 TMP also defines citywide Needs-Based Road and Priority Road Networks through 2046 and with Phases 1–2 of the MCEA for citywide roads completed. In addition to the city-wide TMP, the Tewin Mobility Strategy and Community Design Plan (CDP) also examined nearby concession-road designs that influence the long-term land use, connectivity, and transportation needs in the Tewin area and put forth preferred options at each location.

Based on the framework set out by the TMP and CDP, macro-modelling tested the 40,900-population high-density scenario for buildout of the 2046 Tewin land supply (the Secondary Plan area) using the City's TRANS EMME model. EMME results show the surrounding network generally operates below a V/C threshold of 1.0 which aligns with the threshold adopted in the TMP to assess widening requirements, and as a result, no roadway widening is recommended. No changes to the City's Priority Road Network are warranted because of the addition of Tewin, and no TMP addendum is required. Recognizing EMME's limitations such as behavioural inertia, coarse zoning, exclusion of walk-only trips, it can be expected that Tewin's community design should yield less car-oriented outcomes than the more conservative EMME model. The result suggests a composite auto share around 45% once walk trips are accounted for, which supports the TMP's 48% sustainable-mode objective.

As for the estimated vehicle kilometre traveled (VKT), the high-density scenario is expected to see a VKT increase by approximately 1.2% and vehicle-hours by approximately 2.4% compared with the 2046 "do-nothing" baseline, with negligible change in trip length and a small average speed dip. This shows that the planned network can accommodate Tewin's growth that is accompanied by the community designs that limit additional pressure on the external road infrastructure.

Given that shorter, faster downtown-bound trips from Tewin are generally expected, this will reduce emissions relative to other legacy suburban growth areas and reaffirms the alignment with long-range climate and mobility goals.

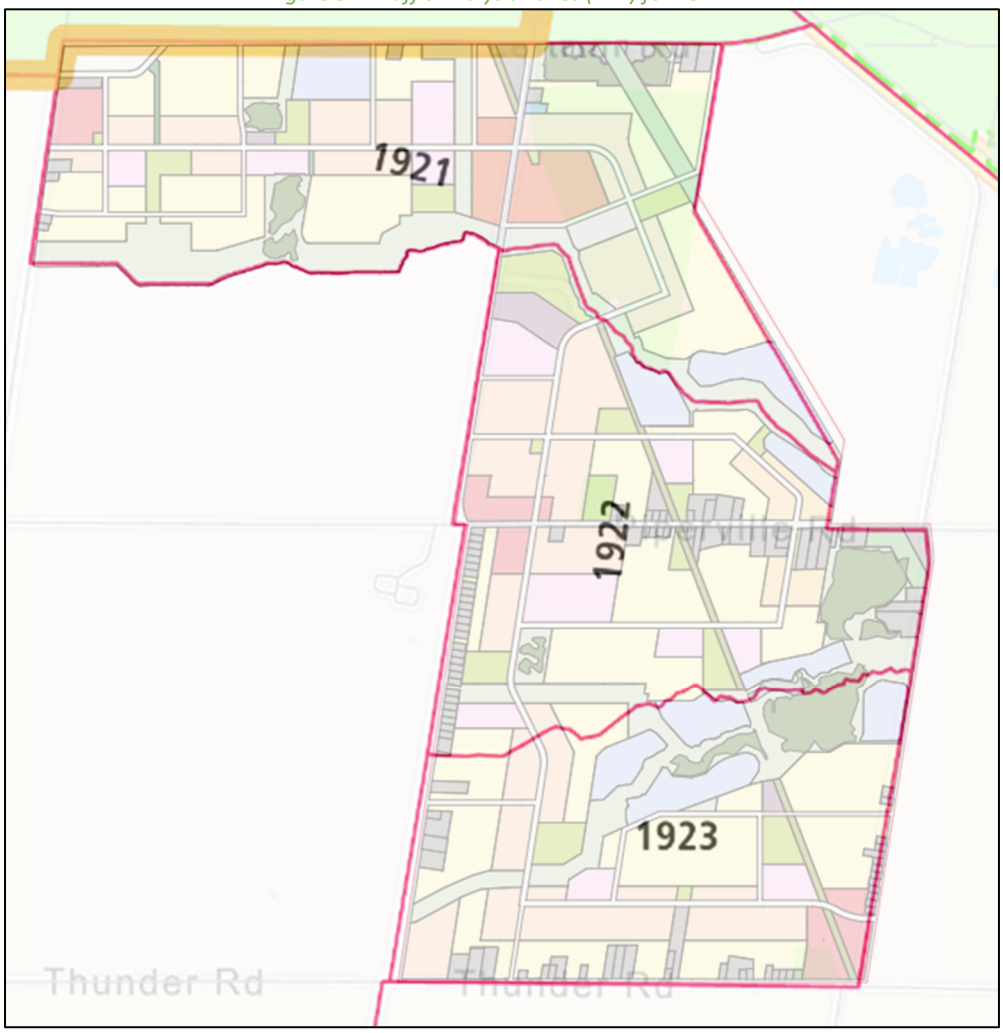
Overall, the strategy demonstrates that Tewin is well positioned for long-term integration into Ottawa's long-term transportation network, with flexible, scalable options as the community and city evolve.

## 10.2 EMME Results and Volume Projections

The population synthesizer is a City of Ottawa tool used to convert land-use and demographic inputs into detailed travel demands for trip generation. Zone-level demographic data, such as households and jobs, are included in the SED/ZSED tables to enable the synthesizer to generate travel behaviour data in the form of EMME-compatible demand matrices. The matrices represent the person-trip distributions across zones and were subsequently used as direct inputs to the trip generation process, rather than using a flat trip generation rate. These matrices were then incorporated into the TRANS model to calculate total trips, mode shares, and directional distributions.

The Tewin EMME Model was developed with the objective to understand impacts to the transportation network from regional trips associated with Tewin. This includes trips originating in and destined outside of Tewin, and trips originating outside of and destined to Tewin. To achieve this objective, three traffic zones (TAZ) were selected to be added to the City's model at the onset of the modelling task. Building on this approach, the development densities and job projections within Tewin from the CDP were also grouped into these three zones to provide a high-level outlook of the traffic projections. The resulting traffic assignment from these three zones to the external road network is considered robust and acceptable to identify capacity constraints on the external road network resulting from Tewin's regional trips. Figure 37 shows the three TAZ zones that covers the Tewin area.

*Figure 37: Traffic Analysis Zones (TAZ) for Tewin*




### 10.2.1 EMME Trip Assignment Methodology

EMME uses a static equilibrium assignment, meaning the model simulates traffic by loading all trips onto the network at once. It assigns each trip to the single fastest route from origin to destination, based on travel times regardless of if the roadway is over capacity. Therefore, the EMME model generates an overall demand that requires manual distribution to the regional and local networks.

At this stage of the Tewin transportation analysis, the EMME Model is applied at an aggregate level to develop volume forecasts for specific internal Tewin roads such as the Mobility Spine or collectors. In the model, regional trips from the Tewin zones use the fastest path to connect to the external road network via major regional roads like Anderson Road, Ramsayville Road and Leitrim Road.

### 10.2.2 Estimating Daily Traffic Volumes

Based on this and using turning movement volumes at major boundary road intersections, it is estimated that the AADT (converted from the EMME forecasted peak hour link volumes) on the Mobility Spine is forecasted to not exceed 5,000 vehicles and internal collectors will be less than 5,000. The AADT on Anderson Road north of Leitrim Road is expected to be around 20,000 and on Anderson Road south of Leitrim Road is expected to be around 12,000. The estimated AADTs are in line with how Tewin's internal road network was designed, i.e., fine grained

local roads/collectors connecting to the Mobility Spine and boundary roads to distribute traffic evenly across the network to minimize localized road segments widening.

## 10.3 Operational Analysis of Key Intersections

Synchro analysis was undertaken for key intersections surrounding and within Tewin. The analysis reflects a "Decide and Provide" approach consistent with all other design elements previously presented. In all cases, signalizations have been incorporated, and where there are no impacts to the existing ROWs, meaning intersection improvements are the limit to what is required, the additional auxiliary lanes have been considered in the analysis proactively. The following table summarizes the existing conditions of the key intersections along with the modifications such as signalization.

*Leitrim Road (North Leg) at Ramsayville Road*

The intersection of Leitrim Road North Leg and Ramsayville Road is an intersection with proposed signalization. The northbound approach currently consists of a right-through lane, and the southbound approach consists of a left-through lane. The westbound approach consists of a left-right lane. No turn restrictions are noted.

*Leitrim Road (South Leg) at Ramsayville Road*

The intersection of Leitrim Road South Leg and Ramsayville Road is an intersection with proposed signalization. The northbound approach currently consists of a right-through lane, and the southbound approach consists of a left-through lane. The eastbound approach consists of a left-right lane. No turn restrictions are noted.

*Leitrim Road at Anderson Road*

The intersection of Leitrim Road and Anderson Road is an intersection with proposed signalization. All approaches have one all-direction lane currently. No turn restrictions were noted at this intersection.

*Mobility Spine at Ramsayville Road*

The future intersection of Mobility Spine and Ramsayville Road will be a signalized intersection. The northbound approach will consist of a right-through lane, and the southbound approach will consist of a left-through turn. The westbound approach will consist of a left-right lane. No turn restrictions were noted.

The options of adding additional turning lanes and transit priority measure such as queue jump lanes are also being studied.

*Mobility Spine at Anderson Road*

The future intersection of Mobility Spine and Ramsayville Road will be a signalized intersection. Each approach will consist of all direction lanes. No turn restrictions were noted.

The options of adding additional turning lanes and transit priority measure such as queue jump lanes are also being studied.

*Anderson Road at Highway 417 North Ramp*

The intersection of Highway 417 North Ramp and Anderson Road is an intersection with proposed signalization. The northbound approach currently consists of a right-through lane, and the southbound approach consists of a left-through lane. The westbound approach consists of a left-right lane. No turn restrictions are noted.

*Anderson Road at Highway 417 South Ramp*

The intersection of Highway 417 South Ramp and Anderson Road is an intersection with proposed signalization. The northbound approach currently consists of a right-through lane, and the southbound approach consists of a left-through lane. The eastbound approach consists of a left-right lane. No turn restrictions are noted.

Based on the traffic assignment methodology described in Section 10.2, the resulting estimated peak hour turning movement counts at these key intersections are shown in Figure 38 through Figure 40 below:

*Figure 38: Leitrim Road Intersections Turning Movement Counts*


*Figure 39: Mobility Spine Intersections Turning Movement Counts*

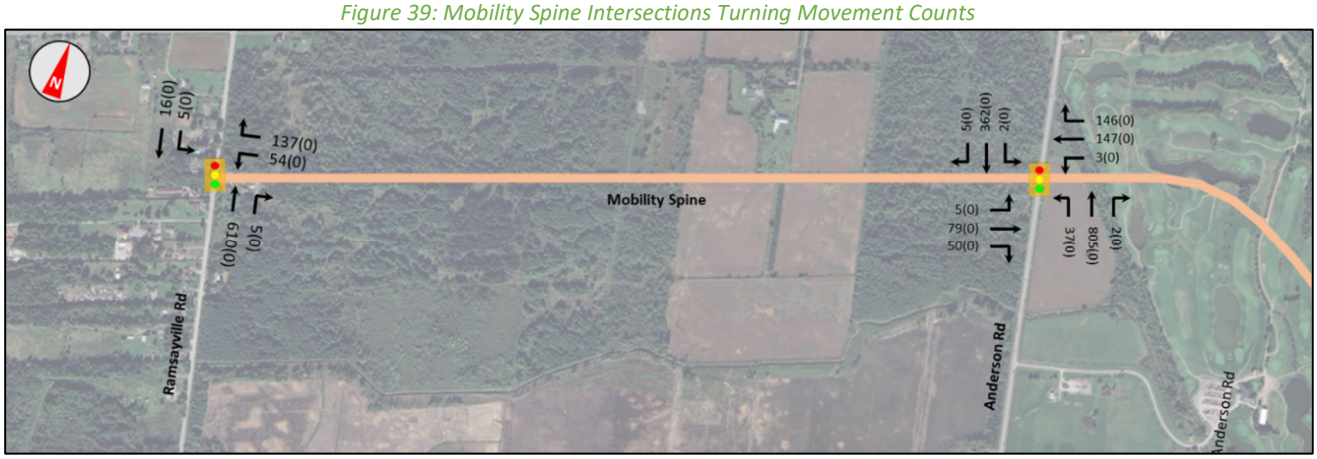



*Figure 40: Highway 417 Ramps Turning Movement Counts*

The Synchro results were generated and presented in Table 9 below. Based on the previously stated assumptions including intersection configurations, signal and timing plans, all key intersections are projected to operate well.

*Table 9: Synchro Analysis Results*

| Intersection and Improvements Assumed | Lane | AM Peak Hour | | | |
|---|---|---|---|---|---|
| | | LOS | V/C | Delay (s) | Q (95th) |
| **Leitrim Road and Ramsayville Road N**<br><br>*Signalized, right turn lane added to NB & WB* | WBL | C | 0.72 | 24.8 | 99.8 |
| | WBR | E | 0.93 | 43.4 | **#148.2** |
| | NBT | C | 0.77 | 26.2 | m104.1 |
| | NBR | A | 0.49 | 14.8 | m17.1 |
| | SBL/T | A | 0.15 | 16.5 | 13.1 |
| | **Overall** | **C** | - | **30.0** | - |
| **Leitrim Road and Ramsayville Road S**<br><br>*Signalized* | EBL/R | A | 0.55 | 38.3 | 37.3 |
| | NBL/T | D | 0.87 | 22.1 | **#184.1** |
| | SBT/R | A | 0.46 | 2.7 | 8.0 |
| | **Overall** | **B** | - | **16.5** | - |
| **Mobility Spine and Ramsayville Road**<br><br>*Signalized* | WBL/R | C | 0.72 | 44.8 | 47.9 |
| | NBT/R | B | 0.62 | 13.7 | 103.2 |
| | SBT/L | A | 0.02 | 12.3 | m5.0 |
| | **Overall** | **C** | - | **20.8** | - |
| **Leitrim Road and Anderson Rd**<br><br>*Signalized, left turn and right-through lanes added to NB & SB, left and right turn lanes added to EB & WB* | EBL | B | 0.70 | 47.7 | **#77.6** |
| | EBT | A | 0.05 | 29.3 | 12.1 |
| | EBR | A | 0.02 | 0.5 | 0.7 |
| | WBL | A | 0.03 | 38.0 | 5.7 |
| | WBT | A | 0.32 | 43.4 | 40.5 |
| | WBR | E | 0.94 | 63.0 | **#115.3** |
| | NBL | A | 0.10 | 10.7 | m3.7 |
| | NBT/R | E | 0.93 | 27.9 | **#295.2** |
| | SBL | A | 0.12 | 11.7 | m3.0 |
| | SBT/R | B | 0.62 | 14.9 | 111.7 |
| | **Overall** | **C** | - | **32.4** | - |
| **Mobility Spine and Anderson Road**<br><br>*Signalized* | WBL/R | C | 0.72 | 44.8 | 47.9 |
| | NBT/R | B | 0.62 | 13.7 | 103.2 |
| | SBL/T | A | 0.02 | 12.3 | m5.0 |
| | **Overall** | **C** | - | **20.8** | - |
| **Anderson Road and Highway 417 North Ramp**<br><br>*Signalized, right turn laned added to NB and left turn lane added to SB* | WBL/R | D | 0.84 | 57.4 | 80.5 |
| | NBT | A | 0.36 | 5.2 | 49.5 |
| | NBR | B | 0.65 | 4.1 | 45.1 |
| | SBL | A | 0.01 | 10.7 | 1.8 |
| | SBT | A | 0.07 | 9.6 | 19.1 |
| | **Overall** | **B** | - | **13.3** | - |
| **Anderson Road and Highway 417 South Ramp**<br><br>*Signalized, right turn laned added to SB and left turn lane added to NB* | EBL/R | A | 0.45 | 1.8 | 0.0 |
| | NBL | A | 0.11 | 2.6 | m7.0 |
| | NBT | C | 0.79 | 10.3 | m261.0 |
| | SBT | A | 0.14 | 1.6 | 9.8 |
| | SBR | A | 0.00 | 1.0 | m0.1 |
| | **Overall** | **A** | - | **7.3** | - |

Figure 41 below shows the proposed improvements at the highway ramps.

*Figure 41: Highway 417 Ramps at Anderson Road Designs*


## 10.4 Tewin Road Network

The Mobility Spine and a series of Neighbourhood Collector Street options were previously identified to support internal circulation and connect Tewin to the surrounding concession road network. These collector roads are intended to complement the Mobility Spine, enable secondary vehicle access, and establish a resilient, permeable internal street grid. The full set of selections of the internal road network as described in Section 7.7 are shown in Figure 42 and Table 10 below. All Mobility Spine segments have a 27-m curb-to-curb ROW, the loop collector will have a 26-m ROW and neighbourhood collectors have 22-m curb-to-curb ROW. Local streets will have an 18-m ROW. The ROWs are guided by current City standards and best practice from TIMM, efficient land use, and "Decide and Provide" principle that prioritizes alternative transportation modes. Additional modifications may be required at the intersections if future micro-modelling results warrant it.

*Figure 42: Tewin Road Network*

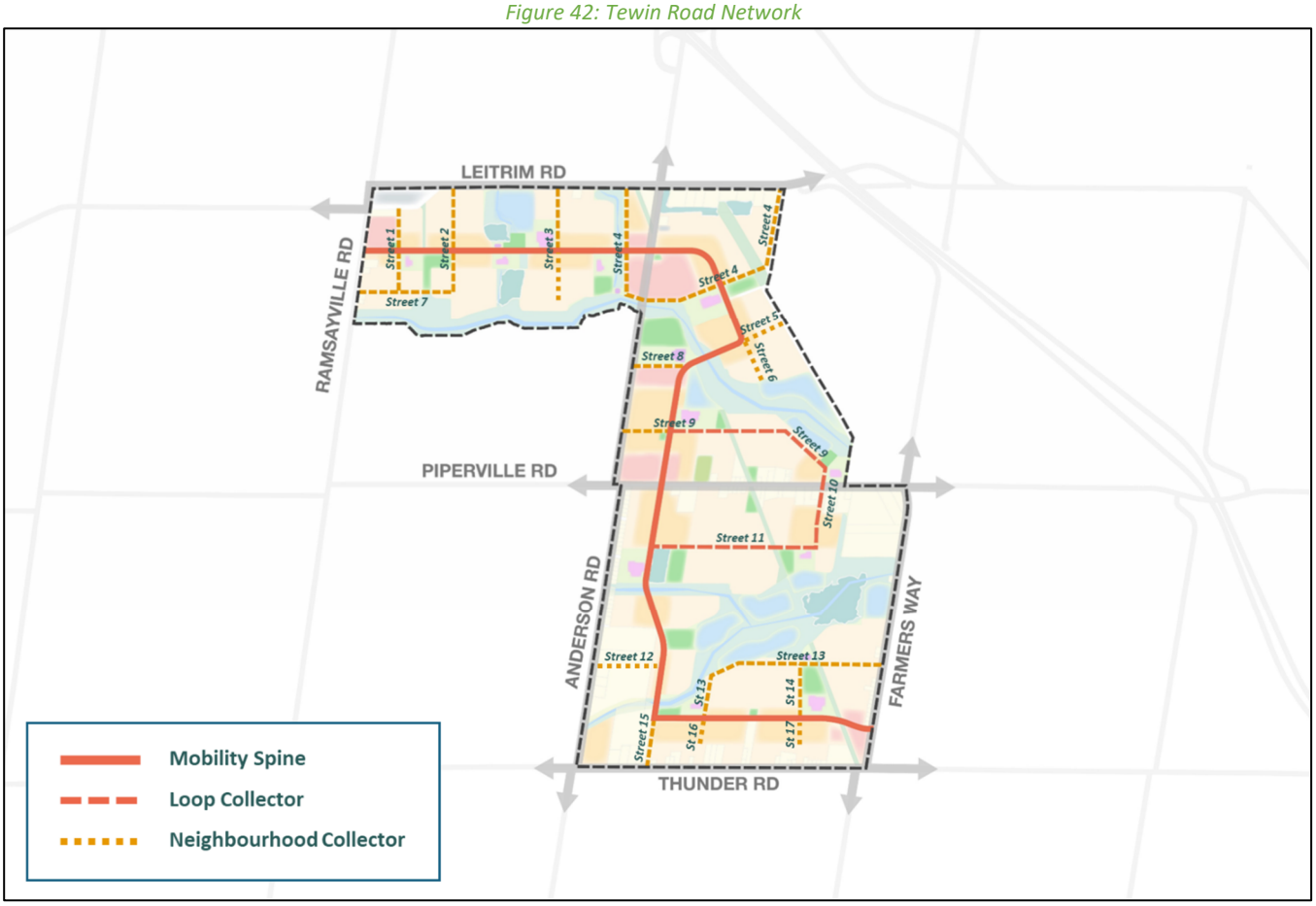



*Table 10: Tewin Internal Roadway Projects and ROW Protections*

| Road Name | Description | | Classification | ROW (m) | Length (m) |
|---|---|---|---|---|---|
| | From | To | | | |
| **Mobility Spine** | Ramsayville Road | Street 2 | Mobility Spine | 27 | 846 |
| | Street 2 | Anderson Road | Mobility Spine | 27 | 1180 |
| | Anderson Road | Street 5 / Street 6 | Mobility Spine | 27 | 1054 |
| | Street 5 / Street 6 | Piperville Road | Mobility Spine | 27 | 1290 |
| | Piperville Road | Street 12 | Mobility Spine | 27 | 1260 |
| | Street 12 | Street 15 / Mobility Spine | Mobility Spine | 27 | 439 |
| | Street 15 / Mobility Spine | Street 14 / Street 17 | Mobility Spine | 27 | 1021 |
| | Street 14 / Street 17 | Farmer's Way | Mobility Spine | 27 | 493 |
| **Street 1** | New Leitrim Road | Street 7 | Collector Road | 22 | 581 |
| **Street 2** | Leitrim Road | Mobility Spine | Collector Road | 22 | 423 |
| | Mobility Spine | Street 7 | Key Local Connection | 18 | 284 |
| **Street 3** | Leitrim Road | Mobility Spine | Collector Road | 22 | 430 |
| | Mobility Spine | (End) | Key Local Connection | 18 | 283 |
| **Street 4** | Leitrim Road | Mobility Spine | Collector Road | 22 | 431 |
| | (Cul-de-Sac) | Anderson Road | Key Local Connection | 18 | 414 |
| | Anderson Road | Mobility Spine | Collector Road | 22 | 541 |
| | Mobility Spine | Leitrim Road | Collector Road | 22 | 881 |

| Road Name | Description | | Classification | ROW (m) | Length (m) |
|---|---|---|---|---|---|
| | From | To | | | |
| **Street 5** | Mobility Spine | (End) | Collector Road | 22 | 287 |
| **Street 6** | Mobility Spine | (End) | Collector Road | 22 | 98 |
| **Street 7** | Ramsayville Road | Street 1 | Collector Road | 22 | 268 |
| | Street 1 | Street 2 | Key Local Connection | 18 | 577 |
| **Street 8** | Anderson Road | Mobility Spine | Key Local Connection | 18 | 308 |
| **Street 9** | Anderson Road | Mobility Spine | Loop Collector | 26 | 309 |
| | Mobility Spine | Street 10 | Loop Collector | 26 | 1182 |
| **Street 10** | Street 9 | Street 11 | Loop Collector | 26 | 570 |
| **Street 11** | Mobility Spine | Street 10 | Loop Collector | 26 | 1100 |
| **Street 12** | Anderson Road | Mobility Spine | Collector Road | 22 | 460 |
| **Street 13** | Mobility Spine | Street 14 | Collector Road | 22 | 938 |
| | Street 14 | Farmer's Way | Key Local Connection | 18 | 554 |
| **Street 14** | Street 13 | Mobility Spine | Collector Road | 22 | 364 |
| **Street 15** | Mobility Spine | Thunder Road | Key Local Connection | 18 | 317 |
| **Street 16** | Mobility Spine | (End) | Collector Road | 22 | 169 |
| **Street 17** | Mobility Spine | (End) | Collector Road | 22 | 146 |

Connecting Tewin to the rest of the City and its transportation network through the evolution of key links, will happen in stages. These projects bridge the gap between Day 1 and Full Buildout of the community. For example, in order to provide efficient transit service as Tewin grows, transit priority measures will be employed along Leitrim Road. The full list of transportation projects to connect Tewin efficiently to the City's network is included in Table 11 below.

*Table 11: Tewin Regional Transportation Improvement Projects*

| Item | Project | Target Day 1 | Notes and Descriptions | Suggested Project Lead |
|---|---|---|---|---|
| **1** | Anderson Rd Urbanization – Leitrim Rd to Smith Gooding Municipal Drain | 0-10 Years from now | Includes signalization at the following intersections:<br>-Anderson Road at Mobility Spine<br>- Anderson Road South of Mobility Spine (x1) | Tewin – Depending on phasing of the community, various segments of Anderson Road through the town core will be urbanized by the landowner group |
| **2** | Leitrim-Anderson Intersection Improvement | 0-10 Years from now | Includes signalization at Anderson Road and Leitrim Road intersection as per the TMP requirement, to benefit existing and projected traffic. | Tewin – Depending on phasing of the community, various segments of Anderson Road through the town core will be urbanized by the landowner group, so this signalization could be integrated with such work |

| | | | | |
|---|---|---|---|---|
| **3** | Intersection Signalization (x13) | 0-20 Years from now | Arterial road signalization costs not captured in other local projects, includes:<br>-Anderson Road at 417 W Ramp (x1)<br>- Anderson Road at 417 E Ramp (x1)<br>-Anderson Road between Mobility Spine and Piperville Road (x2)<br>- Anderson Road between Piperville Road and Thunder Road (x1)<br>-Farmers Way North of Mobility Spine (x1)<br>- Leitrim Road between Ramsayville and Anderson Road (x4)<br>- Piperville Road between Mobility Spine and Farmers Way (x1)<br>- Ramsayville Road between Mobility Spine and Piperville Road (x1)<br>- Thunder Road between Anderson Road and Farmers Way (x1) | Tewin – Depending on phasing of the community, various intersection improvements and signalizations can be led by the landowner group |
| **4** | Leitrim Transit Priority Corridor Intersection Improvements (x3) | 0-10 Years from now | -Leitrim Road and Ramsayville Road N (x1)<br>-Leitrim Road and Ramsayville Road S (x1)<br>-Leitrim Road and Hawthorne Road (x1) | Tewin/City - Depending on phasing of the community and regional needs, various intersection improvements and signalizations could be led by the landowner group and/or the City of Ottawa |
| **5** | Conroy Bus Lanes | 10-20 Years from now | Continuous bus lanes that serve Findlay Creek and Tewin with a direct connection to O-Train Line 1 at Hurdman Station or St-Laurent Station, or to destinations inside the Greenbelt within the Alta Vista district. Project limits minimize widening through the Greenbelt where minimal congestion is expected. | City of Ottawa – It is anticipated that the City will undertake an EA for the Conroy Bus Lanes which will confirm the form and function for this project which is expected to be funded through development charges, including contributions from the Tewin community |

## 10.5 Demonstration Planning

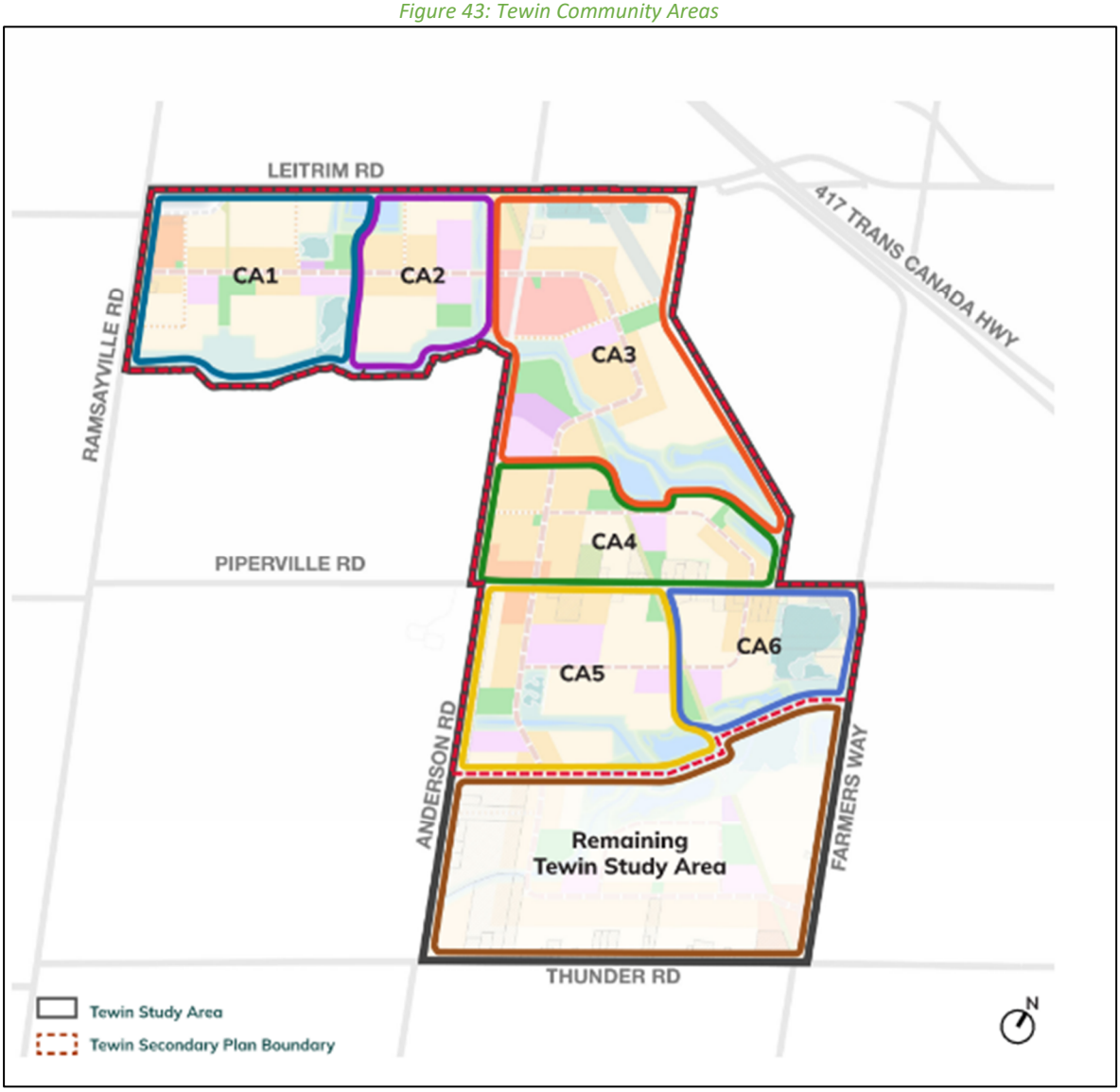
Further to the analysis undertaken within this Mobility Strategy as well as the Community Design Plan (CDP), Tewin will continue to be refined through the demonstration planning process for a series of distinct Community Areas within it. Each of the Community Areas is designed to form a complete, connected, and resilient community. These areas will be planned and implemented in stages, beginning with the Plan of Subdivision process and refined through subsequent development applications. This approach ensures that the planning of public infrastructure, community amenities, and mobility networks is coordinated, efficient, and responsive to the pace of growth.

Given the long-term buildout horizon of Tewin, the planning framework includes some adaptability and flexibility to better response to the evolving conditions. While the overall vision and structure are well defined, the framework allows the incorporation of future changes in policy, technology, and community needs, as well as property ownership and development aspirations. The configuration of streets, development blocks, and open spaces established at this stage represents a guiding framework rather than a fixed design blueprint. These elements will be further refined through detailed Demonstration Planning, supported by technical studies and design analysis at later stages of implementation.

Demonstration Planning provides a more refined design for the individual Community Areas to develop over time. It translates the guiding principles of the Community Design Plan into more detailed land use, mobility, and servicing frameworks that respond to the unique characteristics of each area. Recognizing that there are multiple ways an area may evolve, Demonstration Plans establish a clear structure for development while allowing flexibility for innovation and refinement through subsequent applications.

Community Areas have been defined based on servicing catchments and Community Component boundaries, ensuring that development proceeds in a coordinated and holistic manner. The detailed implementation and improvements to the road network, including realignments, intersection improvements, as well as transit services, will be presented in detail as each Community Area advances through planning and design. This structure enables infrastructure, open spaces, and mobility connections to be delivered comprehensively rather than through isolated projects, supporting the creation of cohesive neighbourhoods that reflect the long-term vision for Tewin. Figure 43 below shows the Community Areas designated for further planning and refinement in the next stage of the development.

*Figure 43: Tewin Community Areas*




### 10.5.1 Community Area Designs

The Demonstration Plans will illustrate the intended structure and form of each Community Area, establishing street and block layouts that define the organization of parks, open spaces, and built form. Each plan will include a public realm framework describing all components of the Open Space System, such as the Ecological Corridor, park network, and conceptual POPS locations, and demonstrate how these spaces relate to one another and to adjacent development. Together, these elements will provide a coordinated framework for a connected, legible, and accessible community structure.

Each Demonstration Plan will define a Complete Mobility Network, incorporating local streets, laneways, trails, and midblock connections to ensure multimodal connectivity throughout the Community Area. The plans will also outline building details, including land use frontages, built form typologies, and building configurations that demonstrate how density targets are achieved. Pedestrian and vehicular access elements, such as entrances, parking, and loading areas, will be illustrated to ensure safe and efficient circulation.

To promote integration between neighbourhoods, the plans will identify the relationship to surrounding areas, showing how open space connections, block structures, and land use transitions are coordinated across boundaries. Community Core and Neighbourhood Centre areas that span multiple Community Areas will be designed to function cohesively, maintaining continuity in structure and character. The Demonstration Plans will also address area-specific servicing, grading, and drainage, along with retail and affordable housing strategies that support the creation of complete and inclusive communities.

For areas containing a Core or Neighbourhood Centre, each plan will include a phasing approach outlining how the development of dwellings and non-residential uses will progress over time. The Demonstration Plan will accompany the first development application within the Community Area and guide the coordination of subsequent applications, ensuring that all phases of development proceed in an integrated and orderly manner. Figure 44 below illustrates the design elements that will be determined at the demonstration planning stage.

*Figure 44: Demonstration Plan for illustration Purpose*

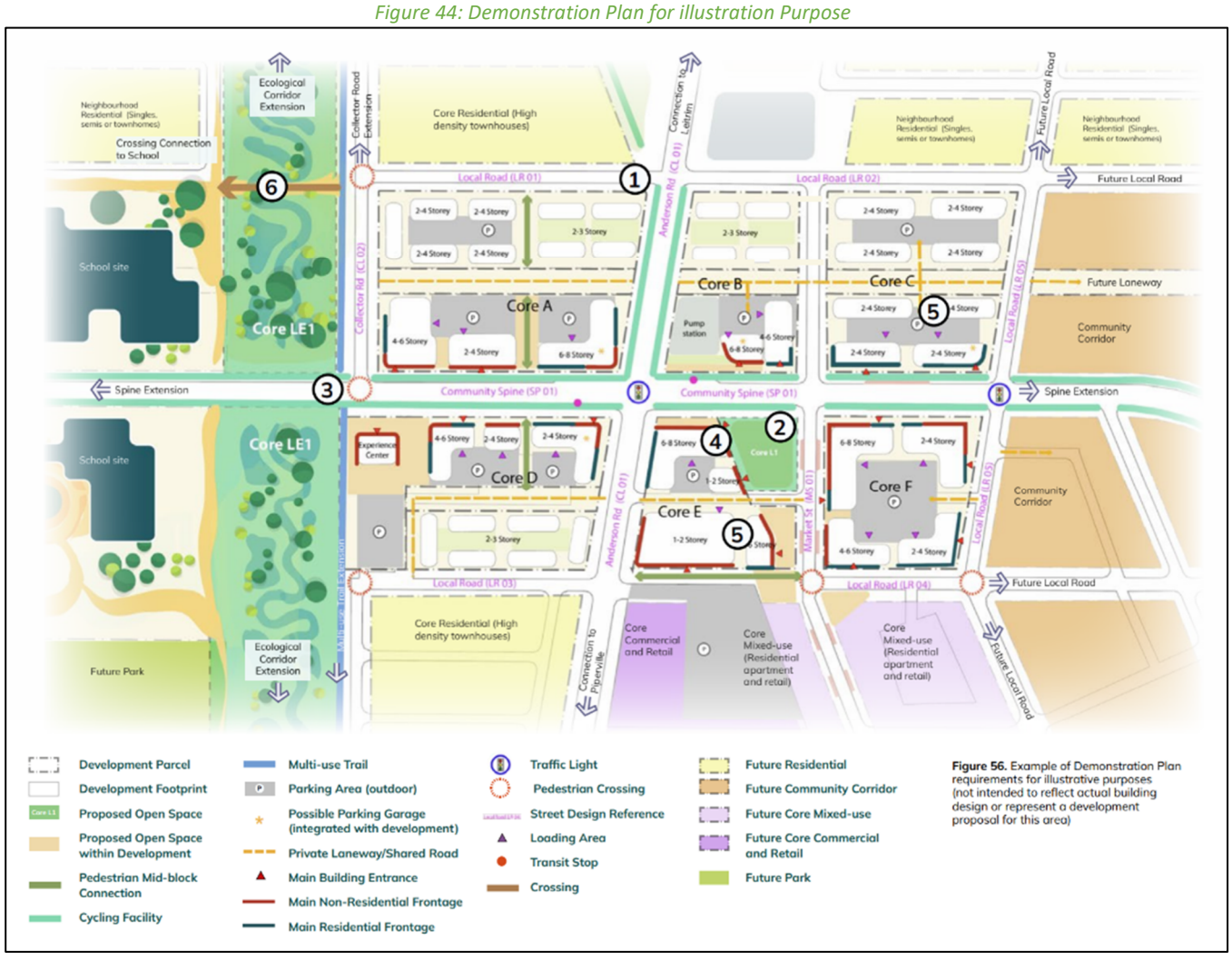



**Figure 56.** Example of Demonstration Plan requirements for illustrative purposes (not intended to reflect actual building design or represent a development proposal for this area)

A Transportation Impact Assessment, following the City's Guidelines, will accompany each Community Area. The following subject areas are to be included in each TIA, that will build on this Mobility Strategy and the CDP.

### 10.5.2 Microsimulation Modelling

The next steps of modelling work, to be completed in support of Demonstration Plans and associated future Planning Act applications like Draft Plans of Subdivision, will focus on assessing operations along the Tewin road network, its connections to boundary roads, and Highway 417 at both the segment level and at signalized intersections. The results of the microsimulation modelling will be used to identify localized improvements.

The upcoming modelling work will be tailored to address input from the City and the MTO. The MTO is expected to provide inputs since significant traffic volumes from Tewin will use the Highway 417 and Anderson Road Interchange. It is anticipated that the TRANS Model will be used for demand forecasting and VISSIM for operational modelling, as both are highly credible modelling tools accepted by the City and the MTO. Synchro modelling will also be required to develop preliminary signal timing plans for the key intersections and identify movements that may require advance turn phases. The Synchro generated timing plans are also a required input to run the VISSIM model.

One of the main challenges for this modelling work is the TRANS Model zone system is not disaggregated at the level required to assign realistic turning movements volumes at the intersection level. The 3 traffic analysis zones (TAZs) were setup to model regional trips to provide representative demand at the link level along Tewin boundary roads.

To address this issue, the 3 TAZs must be disaggregated to at least the 6 zones proposed for Tewin's for the purpose of more refined analysis. This can be achieved via a subarea modelling exercise using the TRANS Model with focus on the Tewin road network including connections to Highway 417. The subarea model with the disaggregated zones will be used to generate traversal matrices (OD demand Matrices) for input to the VISSIM model. An Excel interface will be developed to map the EMME subarea demand matrices to the demand matrices in the Tewin VISSIM model. Since Tewin is a greenfield and the future Tewin's road network will be very different, it is not proposed to calibrate the VISSIM model but use the default model parameters.

The VISSIM model will include the mobility spine and boundary road connections including the Highway 417 and Anderson Road Interchange. All signalized intersections will be modelled. The proposed transit service along the mobility spine will also be modelled. Travel demand matrices for input to the VISSIM model will be from the EMME subarea model. The EMME subarea model will also provide turning movements volumes for input to the Synchro model which will be used to develop signal timing plans for input to the VISSIM model.

Future scenarios will be run in the VISSIM model and KPIs will include intersection delays and LOS, travel times and queues. The results will be used to identify intersection and localized improvements.

### 10.5.3 Geometric Road Design Drawings

A Geometric Road Design Drawing (GRDD) will be completed for all Community Areas and resulting Plans of Subdivision, and for some large-scale site plans. Signage and pavement marking design, traffic calming design including horizontal and vertical geometric elements, and a review of active transportation facilities will be undertaken. A compiled drawing set including labeling and dimensioning of the required transportation elements will be submitted to the City to satisfy the GRDD requirement. The following sections further extend the level of analysis that will be included in the GRDDs of each Development Area.

### 10.5.4 Multi-Modal Level of Service Analysis

The Multimodal Level of Service (MMLOS) Guidelines establish a standardized framework for evaluating the quality of service provided to all modes of transportation within Ottawa’s street network. They outline how level of service should be assessed for walking, cycling, transit, and driving, and define the target performance

thresholds appropriate to each context. The Guidelines ensure that transportation planning and design decisions support safe, efficient, and equitable movement for all users.

MMLOS tools are applied to a wide range of transportation studies and development initiatives where a detailed assessment of network performance is required. By embedding MMLOS evaluation within these processes, the City ensures that all projects are planned and designed to achieve balanced outcomes across all travel modes.

The 2025 update to Ottawa's MMLOS Guidelines builds on the original framework established in 2015 and refined through an addendum in 2017. This iteration aligns with the policy directions of the 2022 Official Plan and 2025 Transportation Master Plan, incorporating emerging best practices from provincial MMLOS guidance, the Healthy Streets Approach, and lessons learned from previous applications. The update also introduces an interactive spreadsheet tool to assist practitioners in evaluating multimodal performance in a consistent and transparent manner.

These updated Guidelines together provide a critical tool for the next step of the Tewin planning process. They ensure that transportation projects across Ottawa are planned, evaluated, and delivered in a way that supports complete streets, promotes multimodal travel, and advances the City's long-term goals for sustainable mobility and livable communities.

### 10.5.5 Traffic Calming Measures Study

The City of Ottawa's Neighbourhood Traffic Calming (NTC) Program provides a structured, evidence-based approach to improving safety and comfort on local and collector roads. The NTC process responds to community requests for safer, more livable streets while balancing city-wide transportation operations.

At the same time, competing priorities such as maintaining efficient transit operations, emergency access, and goods movement require coordination and a balanced act. Based on this principle, the NTC also works in parallel with the Transportation Master Plan's policy direction to reduce the negative impacts of motor traffic and promote safe, complete streets. While traffic volume concerns may also be considered, the Program emphasizes interventions where risks levels are high a persistent based on the historical data.

Through this structured, transparent process, the NTC Program helps deliver lasting, context-sensitive improvements that support Tewin's broader goals for safer, more connected, and people-oriented neighbourhoods.

### 10.5.6 Road Safety Analysis

The City of Ottawa's 2020—2024 Road Safety Action Plan (RSAP) establishes a coordinated framework to guide the City's progress toward its long-term vision of zero fatal and major injury collisions. Annual implementation plans identify targeted countermeasures and initiatives, ensuring that interventions remain responsive to emerging safety trends and community needs.

The RSAP identifies four key emphasis areas where data-driven analysis shows the highest potential to reduce severe collisions: vulnerable road users, intersections, rural roads, and high-risk driver behaviours. These focus areas reflect a comprehensive understanding of city-wide travel environments and prioritize solutions that address localized risks. By targeting these emphasis areas, the City can direct resources efficiently and deliver meaningful reductions in serious injuries and fatalities across the transportation network.

The RSAP provides a proactive and integrated approach to road safety that aligns with the City's broader Transportation Master Plan and Vision Zero principle which are incorporated in the Tewin Mobility Strategy. For

Tewin, the RSAP's principles reinforce the importance of designing streets that inherently protect vulnerable users, manage vehicle speeds, and foster a culture of shared responsibility among all modes of travel.

### 10.5.7 Transportation Demand Management

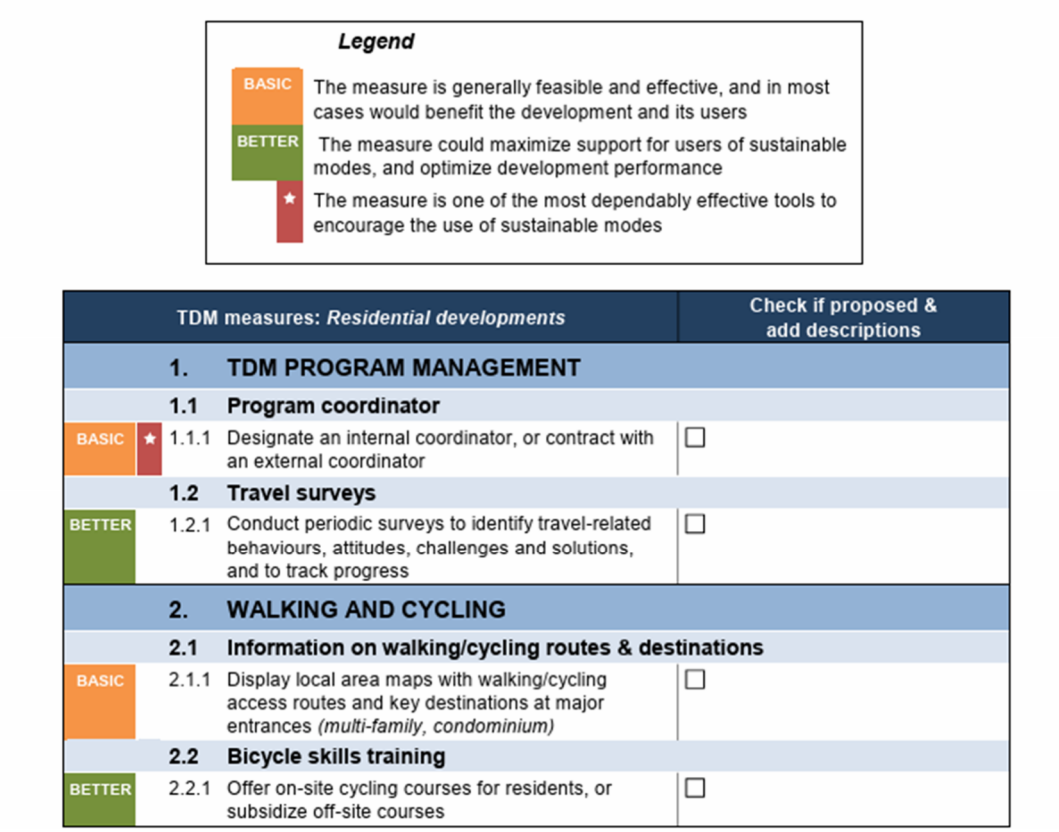
The microscopic modelling work is currently ongoing as part of the demonstration planning process and will be recommending future upgrades to the transit and active facilities along the site boundary street and within the surrounding area context to be implemented after site build-out. With Tewin's "Decide and Provide" approach, the TDM measures are embedded in the community by its design. Additional supporting TDM measures may be provided as required based on the results of the microscopic modelling work to further improve and advance the implementation of the transit priority measures.

The "suite of post occupancy TDM measures" has been summarized in the TDM checklists for the residential land uses. Some of common TDM measures that should be considered for implementation at Tewin include:

- Display local walking/cycling area maps and relevant transit schedules and route maps at entrances
- Provide a multi-modal travel option information package to new residents
- Inclusion of a 1-year Presto card for first time new townhome purchase and apartment rental, with a set time frame for this offer (e.g. 6-months) from the initial opening of the site
- Unbundle parking cost from purchase or rental costs

The full set of TDM measures will be provided as part of the modelling work undergoing in support of the demonstration planning. The City of Ottawa's TDM checklist is provided below as Figure 4545.

*Figure 45: City of Ottawa TDM Measures Checklist for Residential Development*



**Legend**

BASIC — The measure is generally feasible and effective, and in most cases would benefit the development and its users

BETTER — The measure could maximize support for users of sustainable modes, and optimize development performance

★ — The measure is one of the most dependably effective tools to encourage the use of sustainable modes

| | | TDM measures: *Residential developments* | Check if proposed & add descriptions |
|---|---|---|---|
| | **1.** | **TDM PROGRAM MANAGEMENT** | |
| | **1.1** | **Program coordinator** | |
| BASIC ★ | 1.1.1 | Designate an internal coordinator, or contract with an external coordinator | ☐ |
| | **1.2** | **Travel surveys** | |
| BETTER | 1.2.1 | Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress | ☐ |
| | **2.** | **WALKING AND CYCLING** | |
| | **2.1** | **Information on walking/cycling routes & destinations** | |
| BASIC | 2.1.1 | Display local area maps with walking/cycling access routes and key destinations at major entrances *(multi-family, condominium)* | ☐ |
| | **2.2** | **Bicycle skills training** | |
| BETTER | 2.2.1 | Offer on-site cycling courses for residents, or subsidize off-site courses | ☐ |

| | | | TDM measures: *Residential developments* | Check if proposed & add descriptions |
|---|---|---|---|---|
| | | **3.** | **TRANSIT** | |
| | | **3.1** | **Transit information** | |
| BASIC | | 3.1.1 | Display relevant transit schedules and route maps at entrances *(multi-family, condominium)* | ☐ |
| BETTER | | 3.1.2 | Provide real-time arrival information display at entrances *(multi-family, condominium)* | ☐ |
| | | **3.2** | **Transit fare incentives** | |
| BASIC | ★ | 3.2.1 | Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit | ☐ |
| BETTER | | 3.2.2 | Offer at least one year of free monthly transit passes on residence purchase/move-in | ☐ |
| | | **3.3** | **Enhanced public transit service** | |
| BETTER | ★ | 3.3.1 | Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels *(subdivision)* | ☐ |
| | | **3.4** | **Private transit service** | |
| BETTER | | 3.4.1 | Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs) | ☐ |
| | | **4.** | **CARSHARING & BIKESHARING** | |
| | | **4.1** | **Bikeshare stations & memberships** | |
| BETTER | | 4.1.1 | Contract with provider to install on-site bikeshare station *(multi-family)* | ☐ |
| BETTER | | 4.1.2 | Provide residents with bikeshare memberships, either free or subsidized *(multi-family)* | ☐ |
| | | **4.2** | **Carshare vehicles & memberships** | |
| BETTER | | 4.2.1 | Contract with provider to install on-site carshare vehicles and promote their use by residents | ☐ |
| BETTER | | 4.2.2 | Provide residents with carshare memberships, either free or subsidized | ☐ |
| | | **5.** | **PARKING** | |
| | | **5.1** | **Priced parking** | |
| BASIC | ★ | 5.1.1 | Unbundle parking cost from purchase price *(condominium)* | ☐ |
| BASIC | ★ | 5.1.2 | Unbundle parking cost from monthly rent *(multi-family)* | ☐ |
| | | **6.** | **TDM MARKETING & COMMUNICATIONS** | |
| | | **6.1** | **Multimodal travel information** | |
| BASIC | ★ | 6.1.1 | Provide a multimodal travel option information package to new residents | ☐ |
| | | **6.2** | **Personalized trip planning** | |
| BETTER | ★ | 6.2.1 | Offer personalized trip planning to new residents | ☐ |

### 10.5.8 Parking, Loading and Goods Movement

As mentioned in Section 7.10, parking and loading are essential components of a functional community for both the core area and neighbourhoods. In Tewin, parking and loading are carefully planned with sustainability, walkability, and the community's human-scale character in mind. Rather than defaulting to conventional supply-driven models, Tewin's parking and loading strategy embraces flexibility, efficiency, and environmental responsibility, aligning with its long-term mobility and placemaking goals.

Tewin's parking approach recognizes that over-supplying parking can compromise urban design, discourage sustainable transportation, increase stormwater runoff, and contribute to heat island effects. Along the Mobility Spine, on-street parking is prohibited to support reliable transit service. Curbside parking areas may be seasonally reallocated for public uses such as patios or community programming, as per the City's parking management policies.

Tewin's active transportation network is supported by the provision of safe, visible, and secure bicycle parking facilities throughout the community. Bicycle parking will be located at key destinations, including transit stops, parks, schools, shops, and community centres, and designed for daily use, with racks that secure both frame and wheels. They will also be supported by end-of-trip amenities, such as bike repair stations, water fountains, and lockers, particularly at major transit nodes and public facilities. Specific requirements, such as number of bike parking required, the type of bike parking facilities provided, and maintenance required need to adhere to the City of Ottawa By-Law.

Loading and servicing are essential for community operations associated with commercial and retail activities but must be integrated without detracting from the quality of the public realm. Delivery service should also avoid conflicts with active transportation and transit trips. In Tewin, loading areas will be located at the rear or side of buildings and screened with architectural or landscape treatments to minimize visual impact. By providing accesses via rear laneways where available, reducing curb cuts and preserving uninterrupted pedestrian zones along key building frontages.

This strategy ensures that vehicle accommodation supports Tewin's broader goals of building a complete, connected, and people-oriented community.

# 11 Environmental Impacts and Mitigation

This section outlines a general mitigation framework applicable to all Environmental Assessment (EA) studies supporting the development of the Tewin community, including the transportation projects recommended in this Mobility Strategy report. In keeping with the requirements of Ontario's Municipal Class EA (2024), this section describes anticipated environmental and social effects and proposes a suite of high-level mitigation strategies that aim to avoid, minimize, or offset adverse impacts.

Although specific infrastructure projects have not yet advanced to the detailed design phase, this strategy provides a comprehensive, forward-looking approach to mitigation planning across environmental, social, physical, and technical criteria. The strategies included here are flexible by design and intended to be transferable to future design and implementation exercises, while still supporting the broader policy context, Algonquin values, and sustainability goals that guide the Tewin vision. A summary of the anticipated impacts and mitigation measures is provided in Table 12.

## 11.1 Methodology

A project's environmental effect can be described as an impact or change, positive and/or negative, of an activity on the environment. The determination of project environmental effects involved applying the following steps:

- Identify and analyze instances where the project may interact with existing environmental conditions.
- Acknowledge predetermined project activities that act as built-in mitigation measures.
- Identify residual environmental effects, if any;
- Determine significance of the residual environmental effects, after mitigation.

## 11.2 Project Interactions

Table 12 on the next page identifies areas where the project may interact with the biophysical and social environmental components in the study area. Only those components with the potential for interactions with the project were analyzed.

*Table 12: Impact Assessment and Mitigation Criteria*

| | **Project Interactions** | **Potential Environmental Effect** | **Mitigation Measure(s)** | **Monitoring** | **Residual Effects and Significance** |
|---|---|---|---|---|---|
| Biophysical | Air Quality | Debris or dust caused during construction activities | Managed by each contractor/developer with responsibility to follow City by-law requirements | Monitor through construction | I |
| | Wildlife Habitat | Clearing and grubbing activities may impact or displace existing wildlife on lands | Removal of vegetation must be outside of bird and bat breeding or nesting season | Monitor through construction | I |
| | | | Remove natural features only where development is proposed | | |
| | | | Work areas must be isolated with exclusion fencing (typically incorporated into ESC planning) as they are established | | |
| | Fisheries and Watercourses | Passage/habitat disturbances caused by modifications made by Bear Brook and Ramsay Creek | All in-water work is subject to mitigation measures prescribed by the required CA permits (and/or DFO permits in areas of fish habitat) | Monitor through construction, with post-construction monitoring of new features indicated within the specific CA and/or DFO permit authorizing the work. | I (Permits for waterbodies mandate provision of overall "net benefit" for impacted species) |
| | | Passage/habitat disturbances caused by construction activities | Monitor construction on-site with a qualified biologist | | I |
| | | | Fish and turtle relocations by a qualified biologist | | I |

| Criteria | Project Interactions | Potential Environmental Effect | Mitigation Measure(s) | Monitoring | Residual Effects and Significance |
|---|---|---|---|---|---|
| **Biophysical (cont.)** | Woodlands and Tree Removal | Impact to the integrity of the existing woodlands | Significant woodlands will be preserved. Other wooded areas of natural features will only be removed where development is proposed, to minimize tree removal Standard mitigation measures indicated under City of Ottawa tree removal Identify and protect healthy SAR including, but not limited to, fencing parameters to avoid disruption and minimizing exposure to construction fumes. | Monitor through construction | I |
| | Species at Risk (SAR) | Potential disruption or removal of SAR from clearing or construction | SAR-specific mitigation measures to protect individuals and habitats will be prescribed under the MECP net benefit permit required for each SAR on site. | Monitor through construction per SAR permit requirements with post-construction monitoring of any offsetting measures obliged by those permits | I (SAR permits mandate provision of overall "net benefit" for impacted species) |
| | Invasive Species | Potential spread of invasive species | Ash trees will be mulched on site. Phragmites will be collected, stored and tarped on site for at least one year. | Monitor through construction | N |
| | Drainage | Impact to the existing natural drainage routing | Construction of interim ditches and ponds to control runoff during construction. | Monitor through construction | I |
| Social & Cultural | Physical Connectivity | Construction may temporarily disrupt connectivity within and to adjacent communities | Develop detour routes to maximize connectivity along all corridors, roads and pathways during construction | Monitor through construction | I |

| Criteria | Project Interactions | Potential Environmental Effect | Mitigation Measure(s) | Monitoring | Residual Effects and Significance |
|---|---|---|---|---|---|
| Social & Cultural (cont.) | Archaeology | Site alteration disruptions caused during construction activities | Ensure careful planning and staging of construction activities | Monitor through construction | I |
| | Noise | Noise exposure during construction activities | Managed by each contractor/developer with responsibility to follow City by-law requirements | Monitor through construction | I |
| | Existing Land Use | Existing dwelling adjacent to the site may be temporarily disrupted | Managed by each contractor/developer with responsibility to follow City by-law requirements | Monitor through construction | I |
| Physical | Soils | Potential to encounter undesirable soil conditions or contaminated materials | Implement appropriate handling procedures for contaminated materials, and ensuring proper disposal in compliance with environmental regulations. | Monitor through construction | I |
| | Grading | Grade changes within silty clay areas | Must be approved with consideration for permissible grade raise limitations or surcharging requirements. Slope stabilization programs to be implemented, if applicable. | Monitor through construction | I |
| | Groundwater | Potential to encounter groundwater table | Ensure construction activities implement measures to prevent groundwater contamination and adhere to PTTW requirements where applicable, for any water-taking or discharging activities. | Monitor through construction | I |
| Technical | Transit Ridership | Transit connectivity and services may be disrupted, damaged, or altered during construction | Ensure detour routes and alternative transit options are available to support existing transit ridership. | Program to be developed pre-construction with City of Ottawa/OC Transpo, and monitored through construction | I |

## 11.3 Mitigation Measures

In this assessment, mitigation measures are actions intended to eliminate, reduce, control or offset the adverse effects of a project on the existing environment. They can include restitution for any damage to the environment caused by those effects through replacement, restoration, compensation or other means that are technically and economically feasible. They include actions and design features that can be incorporated in the preconstruction, construction, and operation phases that have the specific objective of lessening the significance or severity of environmental effects which may be caused by the project.

Tewin has been designed and will be implemented with the benefit of contemporary planning, engineering, and environmental management practices for construction. Regard shall be had for the legislation, policies, regulations, guidelines, and best practices of the day. Mitigation measures identified in the environmental assessment process will be identified in the construction contracts and specifications.

General Practices, based on current standards, laws and guidelines that should be employed to mitigate general effects on the overall project are described below.

### 11.3.1 Public Communications Plan

The purpose of a communications plan is to keep the public informed about the work in progress and the end result of the construction activity. Residents and other interest holders must be aware of scheduled lane closings and other disruptions to normal service ahead of time in order that their activities can be planned with minimum disruption. The public communications plan should detail how to communicate the information to the public, what information should be disseminated, and at what project stages the communications plan should take place. The proponent will implement the Public Communication Plan. Residents will be notified in advance of upcoming construction activities through appropriate means such as mailed notices, on-site signage, or municipal websites.

### 11.3.2 Erosion, Sedimentation and Drainage Control Plan

The purpose of this plan is to determine the degree of erosion and sedimentation that would occur under normally anticipated weather conditions during the life of the project. It also assists in the development and implementation of mitigative strategies to control any foreseen areas determined to be pre-dispositioned to the problem. This could include: the identification of planning and slope rounding specifications within the contract tender; identifying and specifying seeding locations; identifying areas requiring slope benching or retaining structures; site specific measures to prevent erosion and sediment production; drainage control; and any post construction monitoring and mitigative practices. The contractor will be responsible for the development and implementation of the Erosion, Sedimentation and Drainage Control Plan, subject to review and approval by the City.

### 11.3.3 Excess Soil Management Plan

In accordance with Ontario Regulation 406/19: On-Site and Excess Soil Management, excess soil generated during construction of the subdivisions will be managed to ensure compliance with provincial regulatory requirements. The regulation mandates that excess soil must be characterized, tracked, and managed in a manner that protects human health and the environment, while promoting beneficial reuse where appropriate.

During detailed design, the following measures will be implemented to manage excess soils:

- **Soil Characterization:** A Qualified Person (QP) will conduct sampling and analysis of all potentially excess soils in accordance with the regulation's requirements, including characterization against applicable Site Conditions Standards.

- **Reuse Assessment:** Opportunities for on-site reuse of suitable soils will be prioritized to reduce off-site disposal and transportation. If reuse is not feasible, receiving sites will be identified that meet regulatory requirements for quality, quantity, and purpose of use.
- **Documentation and Tracking:** A Soil Management Plan (SMP) and Tracking System will be developed where applicable, to document soil movements, receiving sites, and compliance with regulatory thresholds.
- **Registration and Notices:** Where required, project notices and excess soil registry filings will be completed in accordance with the regulation's timeframes and content requirements.
- **Contractor Compliance:** Construction tender documents will include specifications to ensure that all contractors comply with O. Reg. 406/19 and any project-specific soil management procedures.

These activities will be integrated construction planning phases to ensure regulatory compliance, minimize environmental impact, and optimize the reuse of clean fill materials.

### 11.3.4 Traffic Control Plan and Signage Plan

Construction activities within the subdivision, including the planned commercial area, will cause temporary traffic and access disruptions. To ensure public safety and minimize inconvenience, the Contractor will be required to prepare a detailed traffic control plan, including temporary detours, signage, and access provisions for residents, businesses, and service vehicles, as required, as part of construction planning and staging.

### 11.3.5 Tree Protection and Landscaping Plan

A landscaping strategy has been developed for the project in the CDP, and will be implemented through future development applications. As part of the subdivision process, a Tree Conservation Report will be prepared to identify existing woodlands consistent with the Environmental Management Plan (EMP) that are to be preserved, along with the required mitigation measures during construction to avoid harm or damage. Trees designated to be kept, will be protected according with the City's Field Practices and Regulatory Codes for Construction Activities around Trees. Existing landscaping (lawns) will be re-instated according to the landscape plan, following construction. The health of any new landscaping materials will be monitored following planting.

### 11.3.6 Residual Effects and Significance

In this assessment, "residual" environmental effects are defined as changes to the environment caused by the project, and vice versa, when compared to existing conditions and taking into account all built-in mitigation measures. Potential residual environmental effects were assessed as to their significance, including spatial and temporal considerations, and were categorized according to the following definitions:

- "*Negligible*" means an effect that may exhibit one or more of the following characteristics:
    - nearly-zero or hardly discernible effect; or o affecting a population or a specific group of individuals at a localized area and/or over a short period in such a way that the effect is similar to random small changes but would have no measurable effect on the population as a whole.
    - "*Insignificant*" means an effect that may exhibit one or more of the following characteristics:
        - not widespread;
        - temporary or short-term duration (i.e., only during construction phase);
        - recurring effect lasting for short periods of time during or after project implementation;
        - affecting a specific group of individuals in a population or community at a localized area or over a short period, but not affecting the integrity of the population or community; or

- not permanent, so that after the stimulus (i.e., project activity) is removed, the integrity of the environmental component would be resumed.

- "*Significant*" means an effect that may exhibit one or more of the following characteristics:
  - widespread;
  - permanent transcendence or contravention of legislation, standards, or environmental guidelines or objectives;
  - permanent reduction in species diversity or population of a species in sufficient magnitude to cause a decline in abundance and/or change in distribution beyond which natural reproduction or immigration would not return that population, or any species dependant on it, to its former level within several generations;
  - permanent loss of critical/productive habitat; and/or
  - permanent alteration to community characteristics or services, established land use patterns, which is severe and undesirable to the community as a whole.

The definitions of significance were adopted for use in this assessment with consideration of both the Municipal Class Environmental Assessment document (2024) and the Impact Assessment Agency of Canada guidance document for describing environmental effects and characterization of significance. These documents provide guidance and are intended to promote a consistent basis across the project environmental components.

Monitoring is important to verify the accuracy of predicting effects. Monitoring measures may need to be recommended to determine what effects actually occurred with project implementation, and may result in the modification of mitigation measures to improve their effectiveness.

## 11.4 Permitting & Environmental Mitigation

As part of the development approval process, a number of environmental permits and studies must be completed to ensure that the proposed residential development aligns with applicable municipal, provincial, and federal regulations. These approvals are essential for protecting natural heritage features, managing environmental impacts, and meeting the City of Ottawa's planning and servicing standards. The table below outlines the primary environmental permits, studies, and approvals that may be required during the planning and implementation stages of development, including the associated responsibilities and timing considerations.

Relevant environmental permits and approvals for the development, along with associated responsibilities, can be found in Table 13.

*Table 13: Environmental permits, approvals, and responsibilities*

| Action | Responsibility | Timing/Process/Permits and Approvals |
|---|---|---|
| Woodlands and Forests – Review recommendation for retention of woodlands / trees | City of Ottawa / Developers | Through EIS, TCR and Plan of Subdivision |
| Tree Conservation Report (TCR) and Landscape Plan | Developers | Reviewed and approved by the City of Ottawa through conditions of Plan of Subdivision |
| Environmental Impact Statement (EIS) | Developers | As required by Official Plan policies<br>Submitted with development applications |
| Stormwater Management Report | Developers | As part of Functional Servicing Report submitted with development applications.<br>Implemented via Plan of Subdivision conditions.<br>Permits maybe required from DFO, SARs<br>Reviewed by City and Conservation Authority |
| Environmental Compliance Approval (CLI-ECA) | Developers | Submit for City approval<br>Required for storm, sanitary sewers, and stormwater ponds |
| Hydrogeological and Geotechnical Studies | Developers | Early in design phase<br>Submitted with development applications as required |
| Conservation Authority Permit (e.g., O. Reg. 174/06) | Developers | Prior to construction within regulated area + Closure of features |
| Endangered Species Act Permit | Developers | Required if species at risk are present<br>Coordinate with MECP during EIS or field studies |
| Archaeological Assessment (Stage 1 & Stage 2+) | Developers | Required before development in areas of archaeological potential<br>Reviewed by Ministry of Citizenship and Multiculturalism |
| Fisheries Act Authorization | Developers | Required for in-water works affecting fish habitat<br>Submit to DFO |
| Migratory Birds Convention Act Compliance | Developers / Biologist | Avoid clearing during nesting season<br>Field review may be required prior to vegetation removal |

### 11.4.1 Approval Authorities

A number of environmental permits and approvals are required as part of the development process to ensure compliance with applicable municipal, provincial, and federal regulations. These approvals are typically tied to the

servicing and environmental conditions of the site and must be addressed through various studies and submissions during the planning and design stages.

The following summarizes the key approval authorities involved in the review and permitting of residential development, along with their respective roles and responsibilities:

**City of Ottawa**

The City of Ottawa is responsible for reviewing development applications to ensure compliance with Official Plan policies, Secondary Plan studies, Zoning By-law provisions, and applicable guidelines such as the Tree Protection By-law and Parkland Dedication By-law. The City also reviews supporting reports such as the Transportation Impact Assessment (TIA), Environmental Impact Statement (EIS), Tree Conservation Report (TCR), and Stormwater Management Reports as part of Plan of Subdivision and Site Plan Control applications. The City may also facilitate coordination with other approval authorities through the development review process.

**Rideau Valley / South Nation Conservation Authority**

Approvals from the Rideau Valley and South Nation Conservation Authority (RVCA and SNC) are required for any proposed works within regulated areas, including floodplains, wetlands, and adjacent lands. Permits are typically required under Ontario Regulation 174/06 for development, interference with wetlands, alterations to shorelines and watercourses, and the modification or closure of headwater drainage features. The Conservation Authority also reviews stormwater management reports and erosion and sediment control plans to ensure compliance with watershed protection objectives.

**Department of Fisheries and Oceans (DFO)**

If a proposed development involves in-water work that may impact fish habitat, an authorization under the Fisheries Act may be required. A Qualified Aquatic Biologist must assess whether the proposed works are likely to result in serious harm to fish, and mitigation measures may be proposed accordingly.

**Additional Authorities**

Other approvals and clearances may be required from additional authorities depending on site-specific conditions. These may include compliance with the Migratory Birds Convention Act during vegetation removal periods, coordination with the Airport Authority for secondary bird hazard area implications, coordination with MTO for any impacts to Highway 417 corridor, and Hydro One approvals for development adjacent to or crossing hydro corridors. Approvals will also be required under the Municipal Drainage Act for works impacting existing municipal drains, and from the Ministry of the Environment, Conservation and Parks (MECP) for matters related to stormwater management, wastewater, and other regulated activities.

# 12 Implementation

The Tewin Mobility Strategy has been developed to support a long-term, adaptable transportation framework that evolves alongside the phased development of the community. Its implementation will rely on a coordinated, incremental approach, anchored by the principles of complete communities, sustainable mobility, and responsive infrastructure delivery. The Mobility Strategy is grounded by the following implementation strategies:

1. A foundational element of this implementation is the construction of Tewin's collector road network. These roads will be delivered incrementally through plans of subdivision, in tandem with the build-out of each neighbourhood phase. Given that Tewin's collector roads will be delivered incrementally through successive plans of subdivision, each project falls under Schedule B of the Municipal Class Environmental Assessment (MCEA). This assumption is based on the anticipated scope and cost of each individual road project, which are estimated to be below the Schedule C financial threshold (currently $3 million). Where multiple collector roads are included within a single phase, a detailed analysis will be undertaken to confirm that each road can be treated as a distinct undertaking, consistent with MCEA guidance. This approach reflects the phased nature of development and ensures environmental diligence and alignment with the broader vision outlined in the Community Design Plan.

2. As each development phase is brought forward, the community will progressively incorporate elements that define a complete neighbourhood such as schools, parks, shops, and community facilities. This sequencing ensures that amenities are provided in step with demand, supporting walkability, local vibrancy, and social cohesion from the earliest stages.

3. Transit service will evolve alongside the community. The strategy begins with an early transit servicing plan, ensuring that all new residents have access to at least basic service levels from the outset. Over time, this network will grow in frequency and coverage, transitioning to a more robust network of local and regional routes. OC Transpo will monitor performance, demand, and ridership trends to inform service adjustments beyond those outlined within the early transit servicing plan, ensuring that transit investment remains responsive to population growth and changing travel patterns.

4. The road network will be actively monitored to ensure it supports the long-term vision of the Mobility Strategy. At each plan of subdivision, the City will require updated transportation analyses, including assessments of travel demand, trip generation, and observed mode shares. These studies will be used to:
    - Assess signal and all-way stop control warrants;
    - Evaluate the need for local intersection improvements (e.g., lane re-alignments, turning lanes, or enhanced pedestrian cross-overs), and support restricting automotive turning movements along the Spine in order to prioritize transit services and the AT network;
    - Validate the community's alignment with its intended mode shift targets.

This approach creates a positive feedback loop, as introduced in earlier sections of this strategy. As transit and active transportation infrastructure are delivered and used, the community becomes more accessible and compact, encouraging further mode shift, enabling higher transit frequencies, and reinforcing local economic activity. Over time, this positive feedback loop will help Tewin mature into a complete, sustainable, and resilient urban community.

The transportation network improvements recommended in this mobility strategy have been carried forward to the Tewin Financial Implementation Plan, under separate cover. The Financial Implementation Plan further details the delivery of the recommended transportation projects, including aligning funding mechanisms with the anticipated required timing of the various improvements. Given the mobility strategy has been completed at a master plan level, to set out the long-range transportation framework for the Tewin lands, future Planning Act applications are expected to provide additional details on the design and timing of the recommended transportation projects.

## 12.1 Project Outlook

The following describes a high-level timeline of Tewin's progression towards the full implementation of its vision.

**Day One: Foundations of a New Community**

Tewin begins to take shape as a community rooted in sustainable planning principles. As the first residents move in, they will find themselves in a natural setting with an extensive trail network. The first homes will be centred close to a community centre, cultural facility, and natural features. The mobility needs will be met by appropriate transit services and connections to surrounding area and introduces residents to the broader range of mobility options. Access to information is made possible by the community's extensive wireless network. The Mobility Spine will be the primary location for transit services and includes pedestrian and cycling facilities.

**Early Years: Expanding the Community and Mobility Options**

At this stage Tewin starts to take shape of a small town in terms of population and services it provides. As the population grows and community matures, it begins to attract jobs and services, such as co-working spaces, small grocery and convenience stores, and new retail opportunities could now emerge within Tewin. These land uses help shift more trips from regional to local. Mobility options will likely continue to diversify to include micro-mobility services like bike sharing and e-scooters and will be fully integrated into the evolving transportation network. With an expanded network of open spaces and active transportation routes, Tewin residents now have access to more destinations via walking, cycling, and transit services. This phase focuses on incentivizing more local businesses to establish within Tewin, optimizing internal road connections, and aligning transit priorities with growing demand, paving the way towards a complete community.

**Later Years: Progression Towards a Complete Community**

The community now includes number of schools, full-service grocery and pharmacies, community centres, and professional service hubs. Walkable open space networks and trail systems are fully established, enhancing active mobility and social cohesion. Transit infrastructure evolves to higher frequencies, providing stronger internal circulation and regional connections. With growing service availability and accessibility, more demands could be met locally, reducing dependence on auto travel and regional commuting. By this point, the transportation system and land use plan are working in harmony to deliver the experience of a sustainable and resilient 15-minute community.

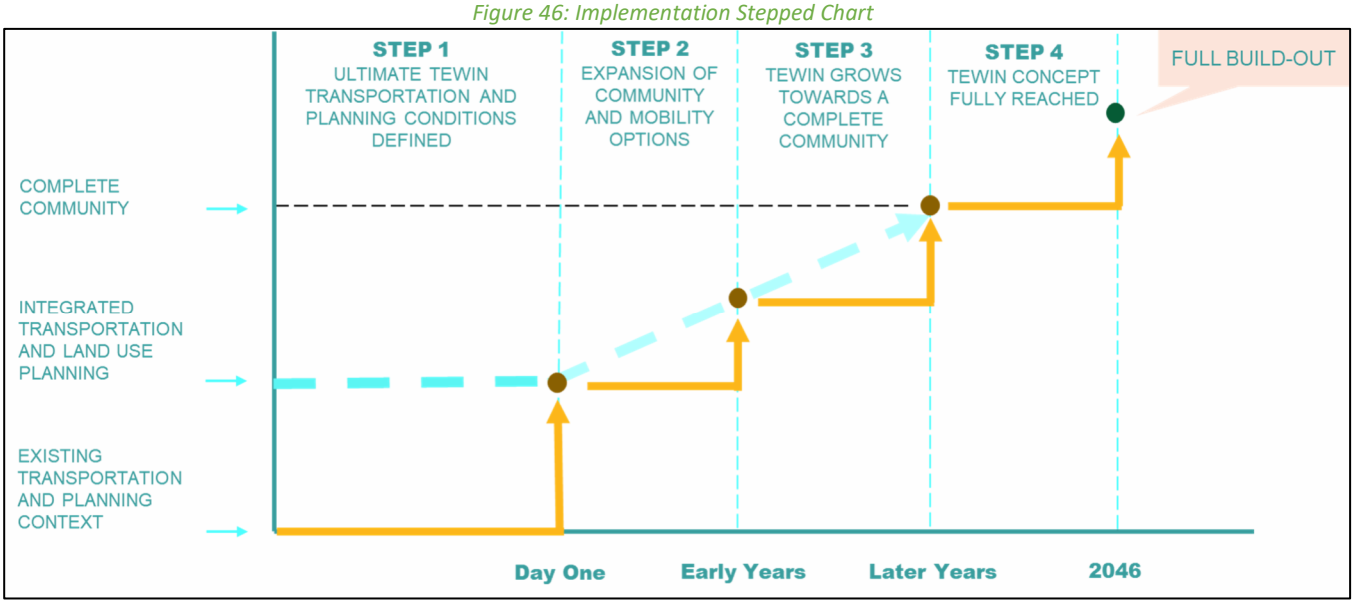
**Full Build-Out: Complete Implementation of Tewin Vision**

All infrastructure is complete, including multimodal mobility corridors and autonomous transit routes. The community offers a complete mix of residential, employment, educational, commercial, and recreational amenities which are all accessible within a short walk, bike ride, or transit trip. Regional travel is minimized, and local trips dominate, supported by seamless integration between physical and virtual mobility options. Transportation infrastructure is now in a phase of continuous monitoring, adaptation, and optimization, informed

by real-time data and resident feedback. Tewin's mobility system at this stage exemplifies the "Decide and Provide" approach, demonstrating how long-term vision, iterative design, and emerging technology can deliver a truly complete, climate-conscious, and inclusive suburban community.

The implementation timeline described is also illustrated in the step chart below as Figure 46.

*Figure 46: Implementation Stepped Chart*




Through this adaptive and integrated implementation framework, the Tewin Mobility Strategy establishes a clear path toward realizing the City's broader goals, the Official Plan's growth management strategy, and the outcomes envisioned in the City's Transportation Master Plan. Continued monitoring and adjustments informed by City-wide evolution and new developments in the area will also ensure the growth is aligned with the established Tewin vision and continues to demonstrate leadership within the City of Ottawa context.

## 12.2 Project Progression and Amendments

The Tewin Mobility Strategy supports the proposed land use while allowing flexibility for future refinements. As detailed design progresses, changes to the Mobility Strategy and implementation plan may be required. This section outlines measures that manage those changes, identifying minor updates that do not affect overall strategy, and major changes that may warrant a full review of the strategy.

The intent of the Mobility Strategy is to develop a transportation infrastructure and service system that would support the Tewin land use plan in compliance with various municipal standards and appropriate ministry guidelines. The Mobility Strategy will serve as a blueprint for delivering high quality transportation service while maintaining sufficient flexibility to allow for potential future refinements and changes to the land use plan. It is prudent to develop a process to recognize that refinements and changes will occur as the project advances through detailed revisions. As Tewin goes through various stages of the approval processes, it is expected that project details will be refined from those represented in its current version.

The following sets out the process to address the changes that may occur after filing and obtaining approval of the transportation package and prior to construction. The change process distinguishes between minor and major changes. For either kind of change, it is the responsibility of the proponent to ensure that all possible concerns of the public and affected agencies are addressed.

Minor changes are those that do not substantially alter the expected impacts and functionality of the systems proposed in this report. Examples of minor changes include, but are not limited to, changes to local streets and pathways connections, provided that they don't impact accessibility, including overall widths, alignments, and other components including landscaping. If a change is deemed necessary, affected landowners and interest holders will be provided details of the modification through subsequent planning applications. Most of such changes are expected to be addressed during the subsequent subdivision and detailed design phase and would remain the responsibility of the proponent to ensure that all relevant issues are taken into account.

Major changes may be defined as those that change the design principles or intent of the Mobility Strategy or Tewin itself, and those that substantially alter the expected impacts associated with Tewin. An example of a major change would result in a shift to an alternate design alignment or configuration that would warrant a review of the environmental assessment; or the changes of roadway alignments or ROWs that will require additional private land purchase. If the proposed change is major, the recommended design, mitigation, and conclusions in this report may require updating. The scope of the required changes will need to be documented and allow the concerns from affected interest holders to be addressed.

This Mobility Strategy presents a high-level transportation solution that guides future development and is not intended to provide a street-by-street detailed design. Rather, this level of detail will be completed in the subsequent Plan of Subdivision and/or Site Plan applications. The more rigorous modelling work and design undertaken will inevitably lead to adjustments on the Mobility Strategy in its current form.

# 13 Conclusions

The Tewin Mobility Strategy sets a new benchmark for integrated mobility planning in Ottawa. It reflects a coordinated, future-focused vision that balances transportation infrastructure provision with land use integration and environmental stewardship. Key conclusions include:

- The Strategy serves to confirm transportation infrastructure recommendations under the MCEA process and concurrently informs Planning Act approvals.
- A combined solution incorporating transit, active transportation, and road improvements was selected through the EA process based on environmental, technical, and land use performance.
- Tewin applies a "Decide and Provide" approach, ensuring proactive alignment between land use, travel behavior, and transportation investment.
- The internal mobility network is multimodal by design, supporting walking, cycling, transit, and vehicle travel from the outset, following the research and results of the Tewin Integrated Mobility Model (TIMM).
- Transit has been thoroughly modeled and integrated with the City's Priority Transit Network using the City's TRANS 2046 Model, validating its long-term viability.
- The community is centered around a Mobility Spine with dedicated bus lanes, which through a focus on active modes and transit, enables a high-density community where approximately 95% of residents will be within 400 metres of high frequency transit service.
- The road network connects logically with the City's TMP 2025 vision and has been thoroughly modeled using the City's TRANS 2046 Model, confirming its functionality through a set of recommended localized intersection improvements.
- Innovative road typologies and context-sensitive cross-sections are used to reflect Tewin's unique identity and design aspirations.
- The active transportation network supports year-round travel, including winter-maintained facilities and connections to natural trail systems.
- The Strategy is adaptable and designed to evolve alongside changing technologies, community needs, and policy shifts.
- Future steps to achieve the vision contained in the Strategy will be included in each phase of development, which will undergo the Community Area Design and Plan of Subdivision process, supported by a micro simulation exercise and Transportation Impact Assessments, per the City's 2017 guidelines where all aspects of the transportation network will be studied and monitored for each phase (e.g. transit service, street and facility design, TDM measures, and intersection improvements)

Together, these elements ensure that Tewin will emerge as a vibrant, walkable, transit-oriented and sustainable community that exemplifies the best of contemporary planning and design, Algonquin values, and environmental responsibility.

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# Appendix A

Existing Conditions Report

*See Existing Conditions Report Binder*

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# Appendix B

Public Consultation Materials

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# Appendix C

Detailed Analysis & Evaluation Tables

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# Appendix D

TIMM Technical Memo

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# Appendix E

Collector Road Screening Table

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