



Report to: Development Services Committee

Meeting Date: June 21, 2021

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**SUBJECT:** Active Transportation Master Plan (City-wide)  
**PREPARED BY:** Loy Cheah, Acting Director, Engineering, Ext. 4838  
Fion Ho, TDM Coordinator, Transportation, Ext. 2160

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**RECOMMENDATION:**

- 1) That the staff report titled “Active Transportation Master Plan (City-wide)”, and the presentation by Zibby Petch of IBI Group be received; and,
- 2) That the Active Transportation Master Plan be endorsed in principle; and
- 3) That implementation funding of the Active Transportation Master Plan be assessed and included as part of the current Development Charges Bylaw update as appropriate; and
- 4) That the City Clerk send a copy of this report and Council resolution to York Region, City of Richmond Hill and the City of Vaughan for information; and further,
- 5) That staff be authorized and directed to do all things necessary to give effect to this resolution.

**EXECUTIVE SUMMARY:**

1. The development of the Active Transportation Master Plan (ATMP) is complete.
2. It is an update of the 2009 Pathways and Trails Master Plan and 2010 Cycling Master Plan.
3. Based on a vision developed with input from the public and stakeholders, the ATMP builds upon active transportation policies of the City, York Region and Province of Ontario.
4. User safety and comfort were priority factors in developing the recommendations of the ATMP.
5. The ATMP proposes an ultimate walking and cycling network shown in Table 1 below.
6. It expands the network of pedestrian and cycling facilities to include 184.2 km of off-road trails, 147 km of cycle tracks & protected bike lanes and 148.8 km of bike lanes.
7. The implementation strategy includes phasing of recommendations, funding strategy, and monitoring and tracking of implementation progress.

**PURPOSE:**

The purpose of this report is to report on the completion of the Active Transportation Master Plan Study, and request Council to endorse the Active Transportation Master Plan as the guiding document for active transportation infrastructure, policy and programming implementation within the City.

**BACKGROUND:**

The City of Markham is anticipated to experience significant growth in population (total 421,600 people) and employment (total 240,000 jobs) to 2031. Therefore, there is greater requirement for the overall transportation system to move people and goods more efficiently. To manage sustainable growth to 2031, the City of Markham's Official Plan (2014) envisions a "transportation system that increase mobility options for all users, including pedestrians, cyclists and transit riders". The Official Plan also identifies active transportation as an important component of a balanced and integrated transportation system, which aligns with the Metrolinx 2041 Regional Transportation Plan (2018) and York Region Transportation Master Plan (2016).

As growth and intensification through development continues to be a dominant feature in Markham, automobile and public transit services are not able to provide for all the transportation needs of residents and workers in Markham. As well, many aspects of transportation technology, infrastructure design, changes to Provincial and York Region policies and plans, coupled with changes to Markham's urban structure and design, have necessitated the development of the Active Transportation Master Plan (ATMP) as an update to the 2010 Cycling Master Plan and 2009 Pathways & Trails Master Plan.

The goals of the ATMP include:

1. Create education and outreach opportunities to raise awareness of active transportation in the City of Markham by engaging and consulting with stakeholders and members of the community.
2. Identify facility improvements and design a high quality on-road and off-road active transportation network that is accessible and connects people to where they live, work and play.
3. Develop an active transportation strategy that looks beyond the network/infrastructure needs and provides guidance on shifting travel behaviour to foster complete communities and strengthening active transportation culture in the City of Markham.
4. Provide high quality connections between the local and regional active transportation network and ensure strong collaboration between City of Markham and York Region in the delivery and implementation of active transportation strategies.
5. Develop a feasible phasing plan for the implementation of a City-wide active transportation network and execution of strategies, programs and activities with careful consideration of resources and financial requirements.

Consulting firm IBI Group was retained to assist staff in developing the ATMP.

Staff reported to Council on April 1, 2019 on the development of the ATMP, focusing on the public and stakeholder consultation and engagement program. Development of the ATMP began in Fall 2018 and included three rounds of public and stakeholder consultation and engagement conducted in Spring 2019, Fall 2019 and Summer 2020. These consultation and engagement sessions greatly helped to define the master plan vision and recommendations.

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**OPTIONS/ DISCUSSION:**

The Active Transportation Master Plan is documented in four volumes: an Executive Summary, the ATMP main study report, a Short-Term Implementation Plan and a Design Guidelines manual for separated cycling facilities. The Executive Summary, which includes the full recommendations of the ATMP is appended in Attachment A.

**A Vision and higher level planning policies and context guided the development of the ATMP**

A vision statement, developed through the public and stakeholder consultation process, helped guide the development of the ATMP:

*“People walking and cycling in the City of Markham feel safe, encouraged and have a sense of community. Networks are comfortable, accessible, safe, convenient and connected, and provide access to key destinations and transit. Through an on-going culture shift and investment, active transportation is a healthy and effective mode of transportation and a competitive alternative to driving for short trips.”*

The following Provincial, Regional and City policy documents support active transportation and provide the foundation for the development of the ATMP:

- Provincial Policy Statement (2020)
- Places to Grow: Growth Plan for the Greater Golden Horseshoe (2017)
- #CycleON: Ontario’s Cycling Strategy (2013) and Action Plan 2.0 (2018)
- Metrolinx 2041 Regional Transportation Plan (2016)
- York Region Official Plan (2016)
- York Region Transportation Master Plan (2016)
- City of Markham Official Plan (2014)
- Building Markham’s Future Together: Strategic Plan (2020-2023)
- Greenprint Community Sustainability Plan (2011)
- Getting to Zero: Markham’s Municipal Energy Plan (2017)

Other factors that provide additional context for the development of the ATMP include current travel patterns in Markham, key societal factors and emerging trends such as increasing active transportation use, social equity, providing safe and comfortable facilities for residents and workers, and protecting for a future with micro-mobility devices.

**Four key themes define the ATMP and addresses the safety and comfort of pedestrians and cyclists**

The importance of safety and comfort resonated throughout the development of the ATMP and were priority factors in developing the recommendations. Ultimately, they are critical factors in encouraging and promoting walking and cycling for people of all ages and abilities.

**Theme 1: Pursue pedestrian network improvements**

Pedestrians are the most vulnerable road users and they include transit users and elementary and secondary school children. Enhancing safe conditions for pedestrians include sidewalk

network improvements, intersection and mid-block crossings, and school zone improvements.

The seven ATMP recommendations in this theme focus on identifying priority areas for improvement, adding more pedestrian crossings and reducing vehicular movements in school zones through measures such as parking and stopping restrictions, to limit student exposure to traffic while walking and cycling to school.

#### Theme 2: Connect & enhance the cycling network

Six recommendations on improving the cycling network focus on upgrading the existing network, particularly at intersections and crossings, implementing the priority network within a five-year horizon to connect all parts of the City through the cycling network, and establishing the ultimate cycling network through different implementation avenues to reduce cost and expedite implementation.

#### Theme 3: Encourage & engage our community

A total of 18 recommendations focus on promoting and supporting walking and cycling habits, building a sense of community, and education and awareness of pedestrian and cycling safety. These recommendations explicitly involve working with partner agencies such as York Regional Police, York Region school boards, York Region Transportation Services and Transit, Markham Cycles and Smart Commute Markham Richmond Hill.

#### Theme 4: Evolve design & maintenance

A key component of the ATMP involves identifying and developing new guidelines for the planning and design of pedestrian and cycling facilities given evolving international, national, provincial and regional planning and design guidelines. The ATMP includes eight recommendations for the City to:

- adopt new planning and design guidelines for pedestrian and cycling facilities,
- incorporate traffic calming measures in pedestrian and cycling facility planning and design decisions, and
- review and pilot new winter maintenance of sidewalks and a cycling spine network to evaluate cost, effectiveness and uptake.

### **The ATMP infrastructure plan expands the network of separated pedestrian and cycling facilities**

The infrastructure network plan recommended by the ATMP is shown in Table 1 below.

Table 1: ATMP Infrastructure Network Plan

|                                     | Existing (km) | Short-Term (km) | Long-Term (km) | Ultimate (km) |
|-------------------------------------|---------------|-----------------|----------------|---------------|
| Shared Roadways                     | 66.1          | 45              | 6.8            | <b>117.9</b>  |
| Boulevard Multi-Use Path            | 31.1          | 20.5            | 58.8           | <b>110.4</b>  |
| Bike lanes & Buffered Bike lanes    | 49.4          | 93.7            | 5.7            | <b>148.8</b>  |
| Cycle Tracks & Protected Bike lanes | 2.4           | 24.3            | 120.3          | <b>147</b>    |
| Off-road Multi-Use Trails           | 16.8          | 31.5            | 135.9          | <b>184.2</b>  |

|              |              |            |              |              |
|--------------|--------------|------------|--------------|--------------|
| <b>TOTAL</b> | <b>165.8</b> | <b>215</b> | <b>327.5</b> | <b>708.3</b> |
|--------------|--------------|------------|--------------|--------------|

**Implementation strategy includes phasing of recommendations, funding strategy, and monitoring and tracking of implementation progress**

Exhibit E-3 in the Executive Summary provides a table summary of the recommendations of the ATMP and are organized under the above four themes.

The ATMP is recommended to be updated every five years because of rapid changes in the understanding of AT needs and in AT technology, particularly around micro-mobility devices. Updating is also needed to reflect changes to capital programs and timing which may influence network build-out.

Therefore, the ATMP focuses implementation on the short-term horizon, which is captured in the Short-Term Implementation Plan.

The financial implications and funding strategy of the ATMP are presented in the Financial Considerations section below.

**FINANCIAL CONSIDERATIONS:**

**Summary cost estimates of the ATMP recommendations are provided**

Exhibit E-4 in the Executive Summary provides summary cost estimates of the ATMP recommendations including the programming, short-term and ultimate network infrastructure recommendation costs, and is reproduced as Table 2 below.

Table 2: ATMP Summary Cost Estimates

| <b>Theme</b>                               | <b>Program Costs (Annual)</b> | <b>Short-Term Infrastructure Costs (10 years)</b> | <b>Ultimate Infrastructure Costs (Beyond 25 Years)</b> |
|--|-------------------------------|---|--|
| Pursuing Pedestrian Network Improvements   | \$35,000                      | \$13,050,000                                      | \$28,250,000   |
| Connecting & Enhancing the Cycling Network | \$10,000                      | \$50,000,000                                      | \$293,000,000  |
| Encouraging Our Community                  | \$307,000                     | -   | -  |
| Evolving Design & Maintenance              | \$50,000                      | -   | -  |
| <b>TOTAL</b>                               | <b>\$402,000</b>              | <b>\$63,050,000</b>                               | <b>\$321,250,000</b>                                   |

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### Annual program costs

Whereas the City currently budgets approximately \$182,000 on AT-related programs, which includes the Smart Commute Markham Richmond Hill initiative, the proposed Master Plan annual programming cost would increase to approximately \$402,000, an incremental cost of \$220,000. The majority of the programming recommendations in the ATMP are continuation or expansion of those programs that the City is already supporting. The most significant new annual program (\$150,000) being proposed in the ATMP is a bike-share/e-scooter-share program. The incremental cost of \$220,000 will require a new funding source.

### Infrastructure costs

As noted above, the implementation focus is on the short-term horizon, which is within 10-years. The estimated infrastructure cost of the short-term plan is \$63 million, with about \$13 million for pedestrian network improvements and \$50 million for cycling network improvements. For the ultimate network, the ATMP projects a total infrastructure cost of \$321 million. The implementation partners for the ultimate network will involve the City, York Region, TRCA and the Province.

The pedestrian network improvements (\$13 million) are already included in the sidewalk network completion program, which has been endorsed by Council but not fully funded. The City currently spends on average, per year, \$2 million and \$2.2 million on pedestrian and cycling infrastructure respectively. The ATMP infrastructure recommendations for the 10-year short-term plan averages to \$6.3 million annually, which is \$2.1 million more than current annual expenditures.

### **Implementation funding of the ATMP to be assessed and included as part of the current Development Charges Bylaw update**

The recommended capital projects in the ATMP are geared towards creating a multi-modal transportation system for Markham, necessary to accommodate increasing travel demand from continuing growth and development. As such, some or all of these capital costs may be eligible for development charges funding.

**Development Charges may not fully fund all of the above infrastructure costs. Therefore, alternate funding sources may need to be identified to fund the non-Development Charge component. Through the DC By-law update and annual capital budgets, staff will need to identify funding sources for the non-DC component if necessary. The Community Benefit Charge (CBC) can potentially fund a portion of this component and the balance may require a tax increase.**

With the DC Bylaw having a 2031 planning horizon, only the Short-Term Implementation Plan capital projects will be considered for inclusion in the DC Bylaw update.

### **Federal, Provincial and Regional funding programs are available to defray capital and program costs**

From time to time, senior levels of government offer grant programs to municipalities to initiate or expedite projects and programs. These include direct grant programs and matching fund programs. Staff will apply for these funding programs as they become

available to implement as many of the ATMP recommendations as possible, paying particular attention to reducing the tax levy component of any project or program. The City has been successful in getting funding from Provincial and Regional funding programs in the past for active transportation projects and programs. Examples of past funding sources include:

- the Federal Government's Investing in Canada Infrastructure Program, which includes a funding stream for pathways and active transportation infrastructure;
- the Provincial Ontario Active School Travel Fund (OAST), administered through Green Communities Canada (GCC);
- the Ontario Municipal Commuter Cycling funding program; and
- York Region's Pedestrian and Cycling Municipal Partnership Program.

More recently, the Federal government has announced a five-year, \$400M funding program for active transportation.

These funding options may be able to cover costs not eligible through development charges.

### **Implementing projects and programs will be subject to available funding and the City's annual budget approval process**

Where funding of this Master Plan through DCs and senior levels of government sources is not sufficient, tax funding would be required. Alternatively, the program implementation timelines could be extended to ensure sufficient funding would be available.

In any case, individual capital project and program to be implemented will be identified on an annual basis and submitted to Council for approval as part of the annual budget request and approval process. Each budget request will identify the funding source(s) for the capital costs and indicate the lifecycle and operating impacts.

To fully implement the recommendations of the ATMP, it is anticipated that three additional full-time equivalent staff would be required. The additional staff will be identified and requested as part of the annual operating budget review process at the appropriate time.

### **Operating and maintenance costs will increase with each project completed**

Additional operating and maintenance, and life cycle costs are subject to the type of AT facility built. Average unit costs for the facility types in the ATMP are shown in Table 3. The incremental annual operating and maintenance cost will be subject to the lengths of AT facilities constructed in each year. Table 3 also presents the annual operating cost impact of completing the Short-Term Plan.

Table 3: AT Facility Annual Operating Costs

| Facility                          | Unit cost<br>(\$/linear m) | Short-Term Plan |                                  |
|-----------------------------------|----------------------------|-----------------|----------------------------------|
|                                   |                            | Length<br>(km)  | Annual Operating Cost<br>(\$/yr) |
| Sidewalk                          | \$ 6.25                    | 60              | \$ 375,000*                      |
| Multi-Use Path (MUP) on boulevard | \$ 6.25                    | 20              | \$ 128,000                       |

|                                     |          |            |  |
|-------------------------------------|----------|------------|--|
| Cycle tracks & protected bike lanes |          |            |  |
| • Without snow load and hauling     | \$ 10.01 | 24         | \$ 486,000   |
| • With snow load and hauling        | \$ 19.58 |            | \$ 950,000   |
| <b>Total</b>                        |          | <b>104</b> | <b>\$989,000 – \$1,453,000<br/>(equivalent to a tax<br/>increase of 0.6% -<br/>0.9%)</b> |

*\*already anticipated as part of the Sidewalk Network Completion Program*

### **Life Cycle Implication**

As in all City infrastructure, once built, cycling facilities must be incorporated into the lifecycle reserve study. The short-term plan will add \$63 million of AT infrastructure into that study.

### **HUMAN RESOURCES CONSIDERATIONS:**

To implement the recommendations of the ATMP, three additional full-time equivalent staff have been identified.

### **ALIGNMENT WITH STRATEGIC PRIORITIES:**

The ATMP aligns with the strategic focus for a Safe & Sustainable Community by improving and making active transportation an attractive and sustainable mobility option. Strategic action #3.1.5 states “Implement Active Transportation Master Plan and first and last mile solutions.” This is also consistent with the policies of the City Official Plan.

### **BUSINESS UNITS CONSULTED AND AFFECTED:**

Planning/Urban Design, and Operations departments participated in the development of the ATMP. The Finance department reviewed this report and their comments were incorporated.

### **RECOMMENDED BY:**

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Loy Cheah, P.Eng.  
Acting Director, Engineering

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Biju Karumanchery, M.C.I.P., R.P.P.  
Acting Commissioner, Development Services

### **ATTACHMENT:**

A. Active Transportation Master Plan Executive Summary