

**RE: Bill 212 – Reducing Gridlock, Saving You Time Act, 2024 – Framework for bike lanes that require removal of a traffic lane.**

### **Benefits of Active Transportation Networks**

On behalf of the City of Hamilton’s Public Health Services, there are several benefits of bike lanes that may be impacted should Bill 212 be proclaimed. Bike lanes provide: (1) improved safety for all road users<sup>1</sup> (including decreased dooring collisions, sideswipe, and rear end collisions)<sup>2</sup>, (2) increased economic outcomes for local businesses<sup>3</sup> and governments<sup>4</sup>, (3) reduced greenhouse gas emissions<sup>5</sup>, (4) decreased access gap for equity-seeking populations<sup>6</sup>, and (5) improved physical and mental health<sup>7</sup>. The health, equity, and safety considerations of providing bike lanes are further detailed below.

Physical activity is a key factor in reducing numerous chronic health conditions and improving individuals’ mental wellbeing.<sup>8, 9</sup> Physical activity, such as through active transportation – walking, cycling, or other active modes of travel – is an effective way to meet the 24-hour movement guidelines that show increases to health, well-being, and fitness. Specifically, bike lanes can increase the total distance traveled by cyclists and the overall ridership of residents.<sup>10</sup> By replacing some car trips with cycling, research indicates that people can gain an additional nine life-years.<sup>11</sup> Moreover, by not incorporating physical activity into Canadians’ lifestyles, the healthcare system is estimated to spend \$6.8 billion per year due to the impact physical inactivity has on chronic diseases.<sup>7</sup>

Prioritizing private vehicle use over active transportation use disproportionately impacts equity-deserving populations such as racialized persons, people living on low incomes, persons with disabilities, women, and Indigenous peoples. For example, lower income neighbourhoods have historically been poorly designed with increased safety and health risks. However, when active transportation is included into the neighbourhood design (i.e., sidewalks, bike lanes, public transit, roadways) social and health inequities are reduced.<sup>6</sup> Given transportation options, individuals can select the affordable and safe travel mode to participate in the workforce, access grocery stores, recreational facilities, and healthcare services.<sup>12</sup> This research is not unique as researchers and governments globally have identified that high-quality multi-modal infrastructure increases the use of active transportation, and its’ associated social and health benefits.<sup>13,14,15,16</sup> Additionally, when individuals have affordable transportation options, they have more money to spend on necessities such as food and rent, or extras such as goods from local business.<sup>7</sup>

Finally, safety of all roadway users increases with the installation of bike lanes. As outlined by the Canadian Paediatric Society<sup>17</sup>, cycling infrastructure that is well-connected has a halo effect where collisions involving motorists, pedestrians, and cyclists decreased in a 500m surrounding area. Additionally, protected bike lanes are the safest option for all roadway users compared to painted lines, protected right of ways, and elevated lanes.<sup>18</sup>

High-quality active transportation infrastructure leads to more people walking and cycling and creates safer roadways for all road users. Active travel has many proven physical and mental health benefits and reduces chronic disease prevalence. These investments need to be distributed equitably so that every community member can enjoy the benefits of active transportation.

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<sup>1</sup> Ministry of Transportation Ontario. (2022). *Ontario road safety annual report*. Road Safety Research Office, Safety Policy, and Education Branch.

<sup>2</sup> City of Toronto. (2017). Bloor Street West Bike Lane Pilot Project Evaluation.

<sup>3</sup> Arancibia, D., Farber, S., Savan, B., Verlinden, Y., Smith Lea, N., Allen, J., & Vernich, L. (2019). Measuring the Local Economic Impacts of Replacing On-Street Parking with Bike Lanes: A Toronto (Canada) Case Study. *Journal of the American Planning Association*, 85(4), 463–481. <https://doi.org/10.1080/01944363.2019.1638816>.

<sup>4</sup> Transport Canada. (2011). Active Transportation in Canada. A resource and planning guide.

<sup>5</sup> Sallis, J.R., Spoon, C., Cavill, N., et al. (2015). Co-benefits of designing communities for active living: an exploration of literature. *International Journal of Behavioral Nutrition and Physical Activity*, 12, 30. <https://doi.org/10.1186/s12966-015-0188-2>.

<sup>6</sup> Rothman, L., Cloutier, M.-S., Manaugh, K., Howard, A.W., Macpherson, A.K., Macarthur, C. (2020). Spatial distribution of roadway environment features related to child pedestrian safety by census tract income in Toronto, Canada. *Injury Prevention*, 26(3), 229-233. <https://doi.org/10.1136/injuryprev-2018-043125>.

<sup>7</sup> Canadian Association of Physicians for the Environment (CAPE). (2021). Active Travel Background Document.

<sup>8</sup> Bingham, P.B. (2009). Physical activity and mental health literature review. *Minding Our Bodies*.

<sup>9</sup> Hamer, M. & Chida, Y. (2008). Active commuting and cardiovascular risk: A meta-analytic review. *Preventive medicine*, 46, 9-13. <https://doi.org/10.1016/j.ypmed.2007.03.006>.

<sup>10</sup> Pedroso, F. E., Angriman, F., Bellows, A. L., & Taylor, K. (2016). Bicycle Use and Cyclist Safety Following Boston's Bicycle Infrastructure Expansion, 2009-2012. *American journal of public health*, 106(12), 2171–2177. <https://doi.org/10.2105/AJPH.2016.303454>.

<sup>11</sup> Daniel, K. & Perrotta, K. (March 2017). *Prescribing Active Travel for Healthy People and a Healthy Planet: A Toolkit for Health Professionals*. Canadian Association of Physicians for the Environment (CAPE).

<sup>12</sup> Laberee, K, Zanutto, M., Funk, A., Kirk, S. F. L., Moore, S. A., & Winters, M. (2023). All Ages and Abilities: exploring the language of municipal cycling policies. *Urban, Planning and Transport Research*, 11(1). <https://doi.org/10.1080/21650020.2023.2264365>.

<sup>13</sup> Buehler, R. & Dill, J. (2015). Bikeway networks: A review of effects on cycling. *Transport Reviews*, 36(1), 9-27. <https://doi.org/10.1080/01441647.2015.1069908>

<sup>14</sup> Pucher, J., & Buehler, R. (2021). *Cycling for Sustainable Cities* (pp. 20-27). MIT Press. <https://mitpress.mit.edu/9780262542029/cycling-for-sustainable-cities/>

<sup>15</sup> Buehler, J. & Pucher, J. (2012). Cycling to work in 90 large American cities: New evidence on the role of bike paths and lanes, *Transportation*, 39(2), pp. 409-432. <http://dx.doi.org/10.1007/s11116-011-9355-8>

<sup>16</sup> Graystone, M., Mitra, R., & Hess, P. M. (2022). Gendered perceptions of cycling safety and on-street bicycle infrastructure: bridging the gap. *Transportation research part D: transport and environment*, 105, 103237. <https://doi.org/10.1016/j.trd.2022.103237>

<sup>17</sup> Canadian Paediatric Society. (2024). Improving cycling safety for children and youth. *Paediatric Child Health*, 29(5), 324-328. <https://doi.org/10.1093/pch/pxae035>.

<sup>18</sup> Cicchino, J. B., McCarthy, M. L., Newgard, C. D., Wall, S. P., DiMaggio, C. J., Kulie, P. E., Arnold, B. N., & Zuby, D. S. (2020). Not all protected bike lanes are the same: Infrastructure and risk of cyclist collisions and falls leading to emergency department visits in three U.S. cities. *Accident; analysis and prevention*, 141, 105490. <https://doi.org/10.1016/j.aap.2020.105490>.