CHAPTER 6

Impacts of Moving Forward

Implementing the strategies and projects of the Moving Forward 2050 Plan will continue to move our Region towards creating a safer, more equitable, reliable and cleaner transportation system. The Moving Forward approach set out in this Plan is expected to produce a number of meaningful and measurable benefits to our communities, economy and environment.

Impacts of Moving Forward

The various factors discussed throughout this Metropolitan Transportation Plan (MTP) make this a critical time for the Buffalo Niagara region's transportation planning.

GBNRTC and our partners have crafted this plan to accommodate a population that is growing for the first time in many decades, to right-size and optimize the region's highway network, to increase use of technologies in transportation system operations, and to enhance Safety and Equity for all road users and affected social groups.

The core of this MTP is the list of projects to enhance the transportation system that are funded within the funding resources that are anticipated between now and year 2050 (see Chapter 5). Roughly 60% of the funding is anticipated to be used for state-of-good-repair system preservation activities, with the remainder allocated to system enhancement projects. Relative to the previous (year 2018) MTP, this is a slight shift in the proportion for system enhancement projects – the Bipartisan infrastructure Law increases funding for maintenance, but it increases funding for enhancement projects even more rapidly. To strike this balance between preservation and enhancement, GBNRTC consulted with stakeholders including the region's agencies that own and operate transportation systems.

This plan developed by GBNRTC and partners is the most ambitious agenda the region has had in the 21st century for transportation system improvements.

Using state-of-the-art computer-based modeling techniques (details in Appendix I), GBNRTC staff have carefully studied how the region's transportation system works today ("Existing Conditions"; year 2020), how it would work in the year 2050 if no improvements are made to the region's transportation infrastructure ("No-Build"), and how it would work in the year 2050 with the system-enhancements projects set forth in this MTP (the "Build" Scenario).

Table 6.1 shows the impacts of implementing the investments outlined in this MTP, along with the changes that can be expected to occur between 2020 and 2050 due to population change in the region. Many of the projects are tested conceptually and these findings should therefore be viewed as indicative (see Appendix I).

Table 6.1 | Impacts of Implementing this MTP's System-Enhancement Projects

PERFORMANCE INDICATOR	EXISTING CONDITIONS (year 2020)	NO-BUILD (year 2050 w/out system enhance-ments)	BUILD (year 2050 with enhancement projects set forth in this MTP)	IMPACT of Implementing MTP 2050 investments (Build vs No-Build)
Vehicle-miles of travel (VMT/year)	24.2 M	26.3 M	26.3 M	No change in VMT.
Vehicle-hours of travel (VHT/year)	815,000	903,000	878,000	VHT decreases by 3% with MTP investments.
Transit mode share (as a proportion of trips by all modes)	1.6%	1.9%	2.2%	Transit mode share increases by 15% due to MTP investments.
Non-motorized mode share (walk-ing/bicycling/e-bikes/e-scooters)	7.4%	7.9%	8.2%	Non-motorized mode share increases by 4%
Amount of green-house gas emis-sions from vehicles (tons/year of CO2-equivalent)	8.8 B	2.64 B	2.62 B	MTP investments will reduce green-house gas emis-sions by an addi-tional 1%, a 70% overall improve-ment between 2020 Base and 2050 Build totals.

The amount of vehicle-miles of travel (a measure of how much driving is occurring across the region) and vehicle-hours of travel (a measure of how much time people spend traveling in the region) both would increase between 2020 and 2050 due to background population change, due to greater demands on the transportation system. The share of all trips that would be made in non-motorized modes (walking and cycling) and transit also increase, reflecting the projection that the region's population growth will be concentrated in higher-density places with strong walking/cycling/transit networks.

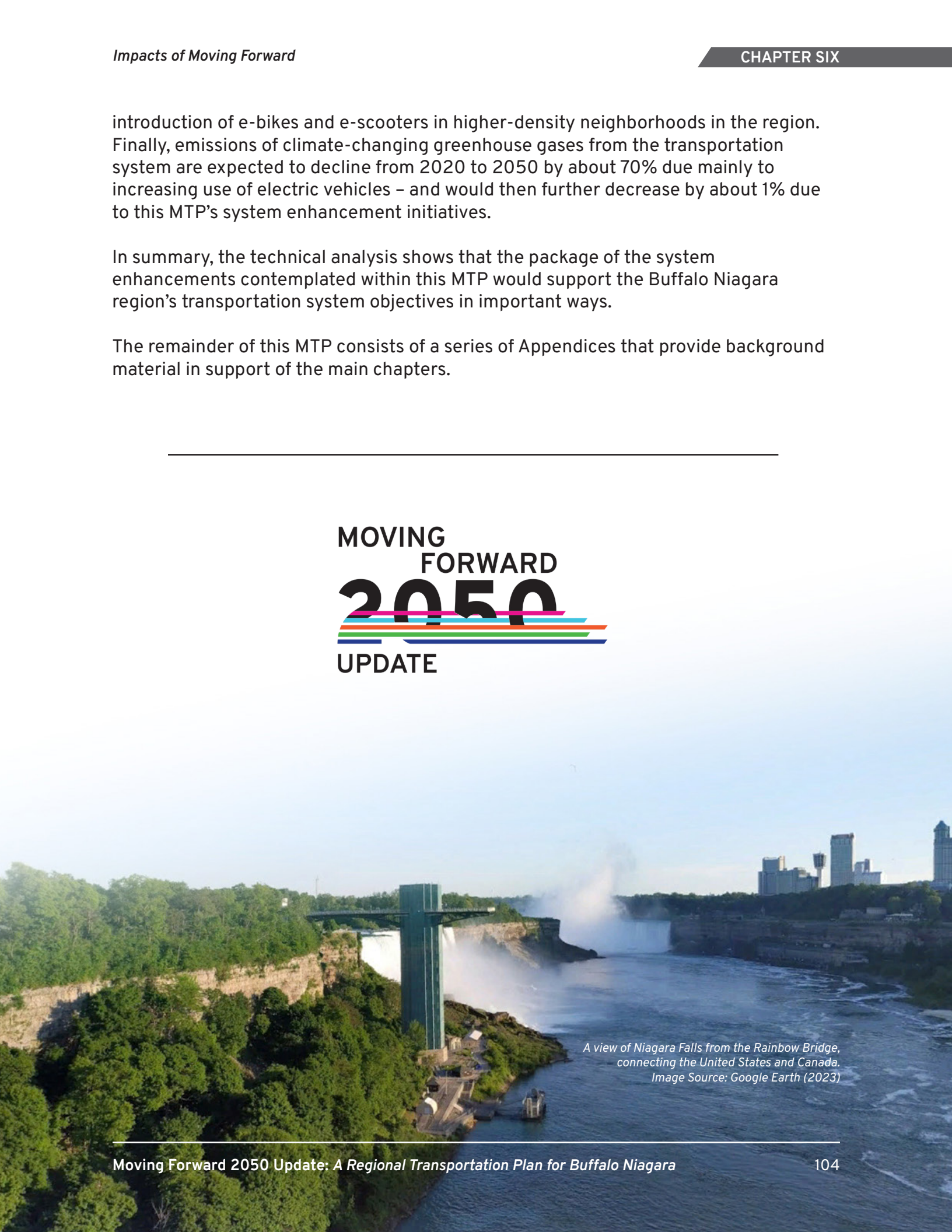
The impact of making the MTP's investments in system enhancement are shown to be powerful in helping the region achieve its transportation objectives. Vehicle-miles of travel would change little, however vehicle-hours would decrease by 3% – indicating a beneficial impact on congestion while still accommodating the region's level of mobility. The transit mode share in the region would be increased by 15%, primarily due to the extension of the Metro light rail system and implementation of Bus Rapid Transit in the Bailey Avenue corridor. The mode share of non-motorized travel would also increase by 4%, in response to improvements in the walking and cycling networks as well as the

introduction of e-bikes and e-scooters in higher-density neighborhoods in the region. Finally, emissions of climate-changing greenhouse gases from the transportation system are expected to decline from 2020 to 2050 by about 70% due mainly to increasing use of electric vehicles – and would then further decrease by about 1% due to this MTP's system enhancement initiatives.

In summary, the technical analysis shows that the package of the system enhancements contemplated within this MTP would support the Buffalo Niagara region's transportation system objectives in important ways.

The remainder of this MTP consists of a series of Appendices that provide background material in support of the main chapters.

MOVING FORWARD 2050 UPDATE



A view of Niagara Falls from the Rainbow Bridge, connecting the United States and Canada. Image Source: Google Earth (2023)