

Comparison of Highway 413 and Highway 407 for Improving Truck and Freight Mobility in the Greater Toronto Area

Prepared September 2023



Report For

Environmental Defence

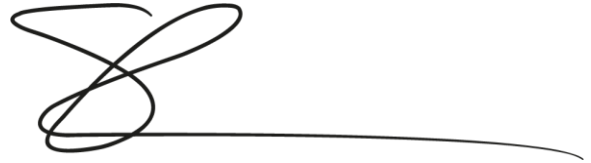
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Executive Summary

Congestion in the GTA is clearly an issue. This is particularly pertinent for the trucking and hauling sector, which operates on tight profit margins and cannot readily displace most journeys onto other modes (e.g., public transport). The Ontario Ministry of Transportation has been exploring other options for reducing congestion on key routes since 2002. One proposed solution is the construction of a new highway, the 413.

If constructed, the 413 would introduce an additional route around the City of Toronto. Situated to the north of Highway 407, the current preferred route would link the existing interchange between the 401 and the 407 Express Toll Route (ETR) at the Halton-Peel boundary in the west with Highway 400 north of Vaughan in the east. Supporters suggest that it would enable some drivers to navigate the GTA without connecting with the highest-traffic sections of the 401.

The 413 project is a divisive issue and has active and vocal stakeholders both for and against its construction. Those in support of the Highway reference benefits including reduced journey times, alleviation of congestion, and the creation of new jobs during construction. The opposition to the 413 argues that these benefits are misnomers and/or could be equally gained through other planned interventions. In addition, the opposition also argue that foregoing construction of the 413 would:

- Prevent the production of additional harmful carbon emissions and air pollutants;
- Protect the Greenbelt and local biodiversity;
- Avoid the disruption of high quality and high value local farmland;
- Save taxpayer dollars;
- Enable the redistribution of funds to other projects; and
- Prevent urban sprawl and the associated damaging impacts to emissions and the environment.

An alternative approach to alleviate the congestion on the 401 is to reduce the tolls on the privately leased 407 ETR. Like the 413, the 407 ETR allows users to pass around Toronto without interfacing with the busiest sections of highway. Unlike the 413, the 407 ETR is already in use, albeit underutilised due to high toll fees. The 407 ETR has the added advantage of being located south of the proposed 413 route, reducing journey times for those looking to travel east to west (or vice versa). Subsidising the 407 ETR toll to encourage the diversion of (truck) traffic from the 401 would have the following benefits:



As using **the 407 ETR is not economically viable for many commercial road users**, introducing a **subsidy could ensure that the price of the toll is lower than** the (perceived and real) **value of the additional time spent in slow-moving traffic on the 401.**



Equivalent journeys with the same start and end destinations can currently take over twice as long on the 401 vs. the 407 ETR. Therefore, shifting road users could significantly improve truck journey times.



Displacing some of the commercial traffic currently using the 401 to the 407 ETR would alleviate congestion for all road users on the 401.



Even fully subsidising truck tolls on the 407 ETR for 30 years would reportedly cost less in Net Present Value than even the lowest cited construction costs for the 413 (\$4 billion to subsidise the tolls vs. at least \$6 billion to construct the 413).



Preventing the construction of the 413 would conserve local natural spaces (including the Greenbelt), removing the risk of harming local wildlife. Additionally, the valuable farmland along the proposed route would be spared.

From financial, practical, and environmental perspectives, subsidising the toll on the 407 ETR is a preferable approach to constructing the 413. Although this approach would require an agreement between the Ontario government and the ETR Concession Company Ltd (and does not improve accessibility to the city for those living in the western regions of the GTA), it addresses the key aim – to reduce the congestion on the 401 – while eliminating the plethora of environmental risks associated with the construction of the 413.

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1.0 Introduction



Eunomia Research & Consulting (Eunomia) was commissioned by Environmental Defence (ED) to conduct research into the extent to which the proposed Highway 413 could alleviate congestion for truckers travelling into and around the Greater Toronto Area (GTA), as well as to explore alternative interventions that would result in the same outcome.

Congestion in the GTA, and specifically in the City of Toronto, is a concern. Indeed, the highway passing through Toronto – the 401 – is widely considered to be the busiest highway in the world.¹ The Ontario Government advocates that the proposed Highway 413 would alleviate some of the congestion issues currently experienced on the 401.² Connecting with the 401 west of Toronto, it would allow drivers to bypass the busiest section of the 401 by passing through the north of the GTA.

Congestion causes delays (leading to economic loss), increased instances of traffic collisions, and negatively impacts key environmental indicators such as greenhouse gas emissions and air quality. Consequently, reducing congestion, particularly in highly populated areas, would likely result in the accumulation of a wide range of economic, environmental, and human health benefits.³ A specific benefit to the trucking and hauling industry would be reduced delivery times, resulting in direct savings.

Building a new highway presents one option for addressing congestion. However, this option is accompanied by numerous disbenefits that are both general (e.g., the emissions associated with constructing a highway) and specific (e.g., the risk to biodiversity caused by disruptions to the Greenbelt). Therefore, it is vital that alternative approaches are explored, and that the benefits and disbenefits of each option are adequately considered.

1.1 Study Aims

The primary objective of this study was to explore two potential approaches for reducing congestion on the 401, and specifically to improve the journey times of the trucking and hauling sector. It aimed to compare an environmentally controversial and politically divisive baseline intervention (constructing the new 413 Highway) with an alternative that is anticipated to be significantly lower impact (reducing the truck toll on the 407 Express Toll Road). It considered the arguments for and against Highway 413 and assessed the extent to which the 407 ETR could achieve the same goal while mitigating the identified risks.

1.2 Methodology

Phase 1: Survey design and deployment. Initially, a survey aimed specifically at truck and haulage operators in the GTA was designed and deployed. The aim of this survey was to gather data on the experience of truckers on the 401 and the 407, as well as opinions on the proposed 413. The data gathered through this activity produced information of qualitative value and was used to shape a series of targeted interviews (see Phase 2)

Phase 2: Stakeholder interviews. Phase 2 saw the findings from the survey explored in further detail through targeted stakeholder interviews. The aim here was to corroborate or disprove any suggestions regarding the status of the trucking industry in relation to the 413 debate. Interviewees included representatives from the sector (e.g., trade associations) as well as local transport academics and researchers. Phase 2 provided colour and direction to the desk-based research (Phase 3).

Phase 3: Desk-based research. The final phase of the study involved desk-based research to explore impacts of, and opportunities for, the two options considered for alleviating congestion around the GTA. Informed by the targeted interviews held in Phase 2, evidence for the environmental, economic, and social impacts of both options (subsidising the toll on the 407 and building the 413) was gathered and reported on.

1.3 Report Structure

The report is structured as follows:

- **Section 2.0** provides an overview of the background and context for the study, highlighting the current highway network structure, the timeline of development to date around Highway 413, and the arguments for and against the creation of the new highway.
- **Section 3.0** explores two intervention options for reducing congestion in the GTA, including building the 413. This section provides an overview of the benefits and disbenefits of the available options.
- **Section 4.0** summarizes the current situation and provides a suite of concluding remarks related to the ongoing Highway 413 debate.
- The **Appendix** provides further background detail.

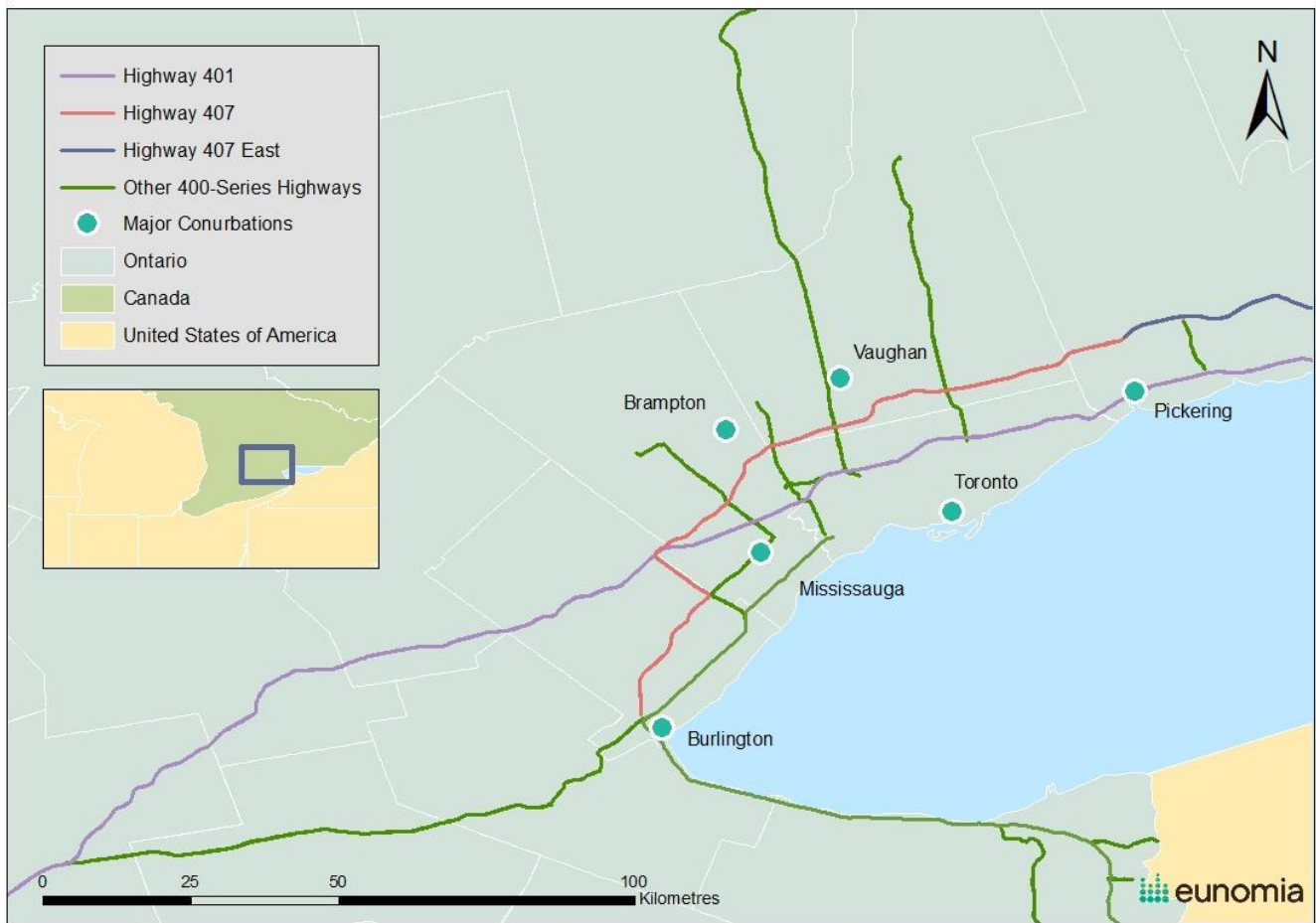
2.0 Background and Context



The GTA borders the northwest shore of Lake Ontario. It encompasses six Toronto boroughs – Etobicoke, North York, Scarborough, York, East York, and the original City of Toronto – as well as four additional regions – Halton, Peel, York, and Durham. The combined population of the GTA was estimated to be 6.7 million in 2021, and the current population of the City of Toronto is 2.7 million.⁴

The GTA is frequently cited as a region undergoing significant growth. According to research undertaken by Toronto Metropolitan University's Centre of Urban Research and Land Development, Toronto was the fastest growing metropolitan area in Canada in 2019.⁵ Underpinning the transport of both goods and people in this area are the 400-series highways, a network of controlled access highways predominantly situated in southern Ontario. Figure 2-1 illustrates the network of 400-series highways in the GTA. A summary of key information related to these highways can be found in A.1.0.

Figure 2-1: Illustration of the network of 400-series highways in the GTA



The following section provides a brief introduction to the timeline of the 413 debate thus far. It then summarizes the arguments for and against the construction of Highway 413.

2.1 The GTA West Corridor/Highway 413 Proposal

The proposed Highway 413 is a four-to-six lane controlled-access highway that would link the existing interchange between the 401 and the 407 ETR at the Halton-Peel boundary in the west with Highway 400 north of Vaughan in the east. It is planned to be approximately 52 km long with two additional extensions (connecting the 413 with Highways 410 and 427 respectively) and 15 interchanges. The proposed route for Highway 413 is shown in Figure 2-2.

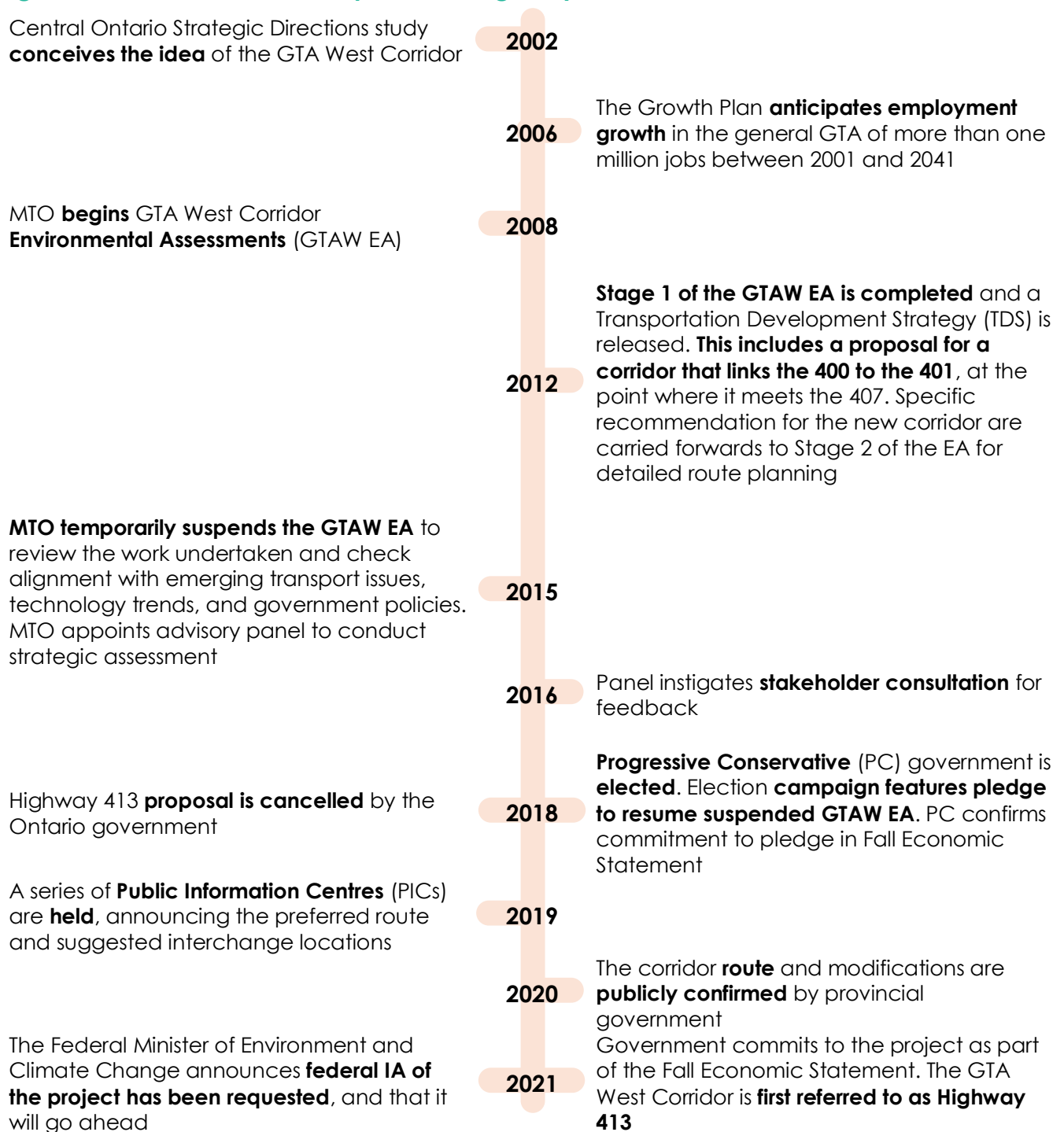
Figure 2-2: Proposed Highway 413 route⁶



2.1.1 Origins of Highway 413

Highway 413, known until 2021 as the GTA West Corridor or GTA West, was first proposed in the Ministry of Transport Ontario's (MTO) Central Ontario Strategic Transportation Directions study in 2002.⁷ Since then, it has been subject to numerous assessments, reviews, suspensions, and cancellations. Following the election of the Progressive Conservative government in 2018, resumption of planning for Highway 413 was announced. The timeline from its initial proposal in 2002 to recent key developments is shown in Figure 2-3.

Figure 2-3: Timeline of development of Highway 413



2.2 Supporters of Highway 413

Supporters of Highway 413 include:

- **The Progressive Conservative Party of Ontario (PCs).** Highway 413 was an integral component of the 2018 election and subsequent 2022 re-election campaign for the PCs.
- **York municipality.** During a March 2021 Regional Council vote, the municipality of York voted against a motion to withdraw support for the Highway 413 project.
- **GTA residents.** A poll conducted for the Ontario Provincial District Council of the Labourers' International Union of North America (LIUNA) surveyed 3,009 Ontario residents and found that 57% of respondents living in the GTA-905 supported the Highway 413 project.
- **The building and land development sector.** The construction of the 413 represents an opportunity to encourage urban sprawl. The Building Industry and Land Development Association (BILD), the trade association for home building and land development in the GTA, has vocally supported "a transportation network like the one that the GTA West Corridor would create".
- **The trucking and hauling sector.** The GTA is a key hub for trucking and logistics activities. The prospect of reducing congestion by constructing the 413 is therefore attractive. Consequently, there are some representatives from the sector (e.g., the Ontario Trucking Association) that are vocal in their support for the project.

Further details about these stakeholders and their reasons for supporting the 413 project can be found in A.2.0.

2.3 Opposition to Highway 413

Stakeholders who have stated their opposition to the 413 include:

- The **New Democratic Party**, the **Green Party**, and the **Liberal Party**. During the 2022 campaign season, all opposition parties to the PCs pledged to cancel the 413 project revived by Premier Doug Ford in his previous term.
- **Numerous Ontario municipalities.** Most municipalities within Ontario have publicly opposed the 413. Among those who have voted to withdraw endorsement for the highway are Mississauga, Vaughan, Halton Hills, Halton Region, Orangeville, Peel Region, and Toronto.
- **GTA residents.** Since its revival in 2018, residents in the GTA have displayed their disapproval of the construction of Highway 413 through petitions, surveys, and grassroots activism. Notably, a survey conducted by EKOS sampled 1,000 GTA residents for their views on the proposed Highway 413.⁸ The results found that 85% of respondents were aware of the project and around half opposed it (vs. 29% who supported it). This response directly contradicts the responses obtained by LIUNA.
- **The trucking and hauling sector.** Despite the potential for reducing congestion for the sector, many representatives within the industry have suggested that alternative approaches exist that could achieve the same outcome through other (less environmentally risky) means.
- **Other organisations.** In addition to the above, numerous organisations across a range of industries have voiced their opposition to the 413. These include environmental groups, representatives from the farming sector, community coalitions, advocacy groups, and regulatory authorities.

Further details about these stakeholders and their reasons for opposing the 413 project can be found in A.3.0.

3.0 Intervention Options



The primary objective of this study was to explore two potential approaches for reducing congestion on the 401, and specifically to improve the journey times of the trucking and hauling sector. It aimed to compare an environmentally controversial and politically divisive baseline intervention (constructing the new 413 Highway) with an alternative that is anticipated to be significantly lower impact (reducing the truck toll on the 407 ETR). It considered the arguments for and against Highway 413 and assessed the extent to which the 407 ETR could achieve the same goal while mitigating the risks.

To identify an alternative interventions capable of alleviating congestion while combating the negative perceived impacts of the 413, it is necessary to first understand:

1. The justification for the construction of Highway 413 (Section 3.1); and
2. The arguments against the construction of Highway 413 (Section 3.2).

3.1 Justification for the Construction of Highway 413

Official projected benefits for the 413 are listed as “to fight congestion, create jobs and prepare for the massive population growth expected in the next 30 years”.⁹ Related to this, potential time savings for 413 users are often discussed and have been the subject of significant debate.

To Fight Congestion

As one of the fastest growing regions in North America, the Greater Golden Horseshoe (GGH – an area larger than the GTA) is expected to increase in population to at least 14.8 million people by 2051.¹⁰ Alongside this population growth is an anticipated increase in trucking and hauling activity. Indeed, the number of trucks on the road is expected to double by 2051. This combination of factors is likely to exacerbate congestion on key thoroughfares unless interventions are identified and implemented to directly combat it. Congestion could cost the GTA up to \$11 billion a year in lost productivity, adds to the costs of goods, and creates harmful carbon emissions.¹¹

To Save Time

Saving time is, in many instances, directly related to reducing congestion. However, an additional reported benefit of the 413 is the reduction in journey times for some residents occurring due to improved accessibility for some regions. Several studies have been conducted seeking to quantify the potential time savings associated with the 413 and the results have been significantly varied. For example:

- A 2018 Advisory Panel report suggested that average savings due to the 417 across the GGH would be just 30 seconds.¹² However, this study reportedly included journeys across the GGH that were not in the vicinity of the 413 and thus are arguably less likely to be impacted by its existence.
- More recent analysis indicates that people travelling the full length of the 413 could save up to 30 minutes each way.¹³ However, this study assumed free flow of traffic on the 413. This is unlikely to occur in the real-world, as induced demand from new drivers will rapidly fill up the 413..

Both studies included assumptions that could be interpreted to limit the accuracy of their findings.

To Create Jobs

Building infrastructure is an integral component of Ontario’s long-term economic plan.¹⁴ In line with this, constructing a new highway would require significant capacity. As such, another benefit discussed in relation to the 413 is the generation of GDP and jobs during its design and build. The quoted anticipated figures for job creation and real DGP generation are 3,500 and \$350 million per year. However, it should be noted that these jobs could also be created during construction of other transport infrastructure.

To Prepare for the Future

The 2019 report *Driving Prosperity: A future of Ontario's automotive sector* from the Ministry of Economic Development, Job Creation and Trade references the automotive sector as “key to the success of [the Ontario] economy”.¹⁵ Among its three ‘pillars for action’ is ‘Innovation’, which includes plans to:

- Support new mobility technologies;
- Enhance the innovation ecosystem; and
- Increase commercialization and scale-up of technology.

The development of Highway 413 is being pitched as an opportunity to support Ontario’s vision for the adoption of new state-of-the-art technologies such as electric vehicles.¹⁶

3.2 The Arguments Against Highway 413

Many of the cited arguments against the development of the 413 are environmentally driven. Others consider whether it is the best use of the required significant funds. As verbalised by Mike Schreiner, leader of the Green Party, many consider the project to be “fiscally and environmentally reckless”. Related to both factors, another persuasive justification for refraining from developing the highway is avoiding the disruption it would cause to local farmland, forests, and multiple river and streams.

To Prevent Additional Carbon Emissions and Air Pollutants

Highway 413 would result in emissions generation during construction, maintenance, and use. In 2021, Eunomia was commissioned to perform an assessment of the carbon emission and air pollution impacts associated with the proposed transport corridor.¹⁷ The assessment used the preferred route published by AECOM as part of the PIC.¹⁸

The modelling undertaken calculated that the greenhouse gas (GHG) emissions associated with construction and maintenance (based on the building materials and vehicles used to construct the highway) could be as high as 113,260 tonnes of CO₂ equivalent (CO₂e). The modelling also revealed that emissions produced by the vehicles using the highway could cause over 17 million tonnes of additional CO₂e by 2050. Furthermore, a Social Cost Benefit Analysis (SCBA) was undertaken to estimate the cumulative damages associated with the anticipated reduction in air quality in the communities surrounding the 413. This SCBA estimated cumulative damages could be as high as \$1.4 billion due to an increase in air quality-related hospital visits and damages to local ecologies.

To Protect the Greenbelt and Local Biodiversity

The potential damage to local wildland with the construction of Highway 413 is significant. The preferred route would pave over 400 acres of the Greenbelt and cross more than 85 rivers and streams.¹⁹ A 2022 publication by Nature Canada stated that:²⁰

“The development of Highway 413 will have devastating impacts on the forests, farms, wetlands, rivers and even communities.”

Losing these protected spaces would have far reaching impacts on local (and more distal) biodiversity. Nature Canada highlights that the Nashville Conservation Reserve is among the areas of natural space that would be destroyed. The Nashville Conservation Reserve is part of an avian superhighway that forms a critical pathway for migratory birds heading north to the boreal forest every spring.²¹

Other species to be affected by the 413 are listed and explained in Environmental Defence’s 2022 report “Highway 413: The Road to Our Ruin”.²² The report, researched and written by leading professors in Integrative Biology at the University of Guelph, identifies birds (e.g., the Canada Warbler), amphibians

(e.g., the Western Chorus Frog), reptiles (e.g., the Jefferson Salamander & Unisexual Ambystoma), fish (e.g., the Redside Dace), insects (e.g., the Bumble Bee), and trees (e.g., the Black Ash) that would be directly and significantly negatively impacted by the construction and use of Highway 413.

To Avoid Disruptions to Local Farmland

Alongside disruption to the Greenbelt and other protected natural areas, the 413 would also pave over more than 2,000 acres of Class 1 and Class 2 farmland.²³ According to the Ministry of Agriculture, Food, and Rural Affairs of Ontario's 2022 report "Grow Ontario: a provincial agri-food strategy", Ontario's agri-food supply chain generated \$47 billion in provincial GDP and employed a tenth of Ontarians in 2021.²⁴

There is approximately 11.8 million acres in Ontario.²⁵ However, less than 5% of the Canadian land mass is made up of prime (i.e., Classes 1, 2, and 3) land. Indeed, only 0.5% is Class 1.²⁶ Consequently, a reduction of 2,000 acres of prime land is potentially significantly damaging for Canada's agricultural productivity.

To Redistribute Funds to Other Projects

Thus far, Ontario's Ministry of Transport has failed to release detailed cost estimates for the construction of Highway 413. However, in 2018, the cost of building the highway was estimated to be over \$6 billion.²⁷ Other referenced costs have been as high as \$10 billion.²⁸ Many have discussed alternative uses for these funds, including other activities also aimed at alleviating congestion in the GTA (e.g., subsidising the toll on Highway 407).²⁹ Other uses of the funds earmarked for the 413 have been suggested by opposition parties (e.g., the Liberal Party). For example, using the money "to build 200 new public schools and repair and upgrade 4,500 others".³⁰

To Prevent Urban Sprawl

A significant concern of many related to the construction of the 413 is that it is likely to encourage urban sprawl. According to research published by Toronto Metropolitan University's City Building Institute, the GTA's population growth has been addressed by low-density sprawl.³¹ This growth pattern is characterized by large plots of land with low population densities. Research comparing the GHG emissions associated with low-density suburban areas with those of densely populated, inner city areas found that those of the former are significantly higher.³² The research attributed much of this to higher private vehicle use.

More recently, the 2019 Energy Conservation Progress Report from the Environmental Commissioner of Ontario identified transportation as Ontario's primary source of climate emissions and air pollution. The report noted that planning policy had driven up these emissions by favouring costly and destructive sprawl. It is hypothesized that Highway 413 would exacerbate this further.

3.3 The Alternative: Reducing the Truck Tolls on the 407 ETR

Numerous alternative approaches that could positively influence journey times for truckers using the 401 have been suggested by various organizations and bodies. These range from fundamental changes to the way in which infrastructure is used (e.g., improving public transit to minimize the use of private vehicles, therefore freeing up highways for commercial vehicles) to specific interventions aimed at the trucking and hauling sector (e.g., introducing truck-only lanes on select highways). The 2018 GTAW Advisory Panel Report included a chapter on alternative approaches.³³ These suggestions considered expansions of existing highways, alternate uses of land, changes to public transit, and different pricing scenarios (including toll removals).

One of the most widely referenced alternative approaches specific to the trucking and hauling sector is related to the subsidy of tolls on the 407 ETR. Proposed by Transport Action Ontario, this approach would see the 407 ETR's toll for truck use compensated by the Ontario government to make it a financially viable solution for commercial use.³⁴ This would, in turn, encourage trucking companies to divert or spread their fleet between the 401 and the 407 ETR, reducing truck traffic and (ultimately) congestion for all road users.

Considering the arguments for and against the construction of Highway 413, a preferable alternative solution for improving journey times for truckers should meet the following requirements:

1. It must be a **commercially viable alternative for the trucking and hauling sector's** use.
2. It must **improve journey times for truckers**.
3. It must **reduce congestion on the 401**.
4. It must be **cost-efficient** vs. building Highway 413.
5. It must **conserve local natural spaces**.

Consequently, the alternative approach to building Highway 413 explored in the following section is reducing the toll for truckers on the 407 ETR. The 407 ETR is the western section of Highway 407. It is privately leased by the 407 ETR Concession Company Ltd. and is tolled for all users. The 407 ETR is divided into four zones, each of which is subject to a varying fee. Fees also vary by time, day, and direction of travel.

The toll for a "Heavy Multiple Unit Vehicle" on Highway 407 ETR is as much as \$1.87 per km during peak hours (3.30 pm to 6.00 pm), in peak directions (eastbound), and at peak locations (Zone 3 – Highway 427 to Highway 404).³⁵ This cost deters most commercial use as shippers and receivers are unwilling to pay the additional cost, despite the potential associated time savings.

In the following section, the five requirements identified in Section 3.3 have been considered in relation to reducing the tolls on the 407 ETR.

Commercial Viability for the Trucking and Hauling Sector

The commercial viability of the 407 ETR as an alternative to the 401 is dependent on the degree of toll reduction and the associated "willingness to pay" value of a reduction in journey time. As of May 2023 (and according to a representative from the PMTC), using the 407 ETR to avoid the City of Toronto costs an average of approximately \$1.42 per km.³⁶ Google Maps data from peak times (i.e., around 5.30 pm) suggests that the journey from the point at which the 401 and 407 ETR meet in the West at Milton to Oshawa to the east of the City of Toronto on the 407 ETR has a total length of 97 km, uses roughly 88 km of tolled route, and can take as little as 50 minutes to travel. The toll for this journey would be approximately \$125. In comparison, the same journey for the 401 is roughly 87 km, can take up 130 minutes, and is not tolled.

The difference between the length of these two routes is roughly 10 km. However, the potential difference in journey time could be as much as 80 minutes. Considering the average hourly wage of a trucker in Canada (\$24 per hour), an additional 80 minutes of drive time only costs an additional \$32. Comparing a \$125 toll with a \$32 additional wage contribution highlights the reason why shippers and receivers may be unwilling to pay to use the 407 ETR.

Looking to other thoroughfares in busy cities in North America, the New York Thruway toll is \$0.20 per km. Applying this same fee to the journey described above would result in a total fee of \$17.60 and therefore potentially a net saving for truckers when considered the additional time implications of the alternative.

Of course, these calculations do not consider journey start and end destinations. They also do not consider the additional benefits associated with making deliveries quicker and therefore drivers being able to complete more within a shift. Additionally, no consideration has been given to the differences in fuel burn associated with idling vs. steady state moving. These factors may exacerbate the benefit further. Regardless, these calculations provide a rough indication of the scale of change to the tolls that would be needed to displace truck use from the 401 to the 407 ETR.

Improved Journey Times for Truckers

As noted in the previous section, the lack of congestion on the 407 ETR can result in some journeys taking less than half the length of time than the equivalent on the 401. The example used above explored a common journey – from the point at which the 401 and 407 ETR meet in the west to Oshawa in east. Here, a journey on the 401 could take up to two hours and ten minutes, whereas the same journey on the 407 ETR (while slightly longer in terms of km) could be as little as 50. If these savings were realised, journey times would certainly be improved for truckers. Of course, should the resulting shift begin to leave the 407 ETR congested, the scale of these improvements may change.

Reduced Congestion on the 401

A 2021 study by Transport Action Ontario considered the extent to which a toll subsidy could displace trucks from the 401 and onto the 407 ETR.³⁷ Using travel flow data, the study concluded that such a subsidy could move 12 to 21 thousand trucks a day from the 401 to the 407 ETR. Daily traffic flow data from the 401 suggests an average day can see up to 450,000 vehicles on the busiest sections. While proportionally 21,000 trucks are just a little under 5% of this figure, the length and width of these vehicles would likely still produce a noticeable difference.

Cost Efficiency

As noted in Section 3.2, the cost for the construction of the 413 has been estimated to range from \$6 billion to upwards of \$10 billion. Estimates are predominantly from 2019-2021. Therefore, inflation may now render these costs even higher. In contrast, Transport Action Ontario's evaluation estimated that subsidising the use of the 407 ETR for trucks to the point that it is toll-free for 30 years would cost a little over \$4 billion in Net Present Value (note this does not include the section of the 407 east of the ETR that is owned by the province). Comparatively, this is cost efficient versus constructing the 413 because:

- The \$4 billion is lower than even the lowest known estimate for construction of the 413.
- The \$4 billion would be paid over the duration of 30 years.
- This accounts for a full subsidy. It is likely possible that simply a reduction in the toll could be sufficient to divert 401 users.

Of course, this would require the 407 ETR Concession Company Ltd. to agree to a subsidy model. Heavier vehicles, such as trucks, cause more damage to roadways during use. Therefore, it is possible that higher overall toll fees will be charged in an attempt to offset likely increased maintenance costs.

Conserve Local Natural Spaces

A key issue with the construction of Highway 413 is its disruption of the Greenbelt and other surrounding natural spaces. If, instead, the 407 ETR were subsidised, there would be no construction activities occurring in these areas. Consequently, many of the negative environmental impacts associated with Highway 413 would be avoided. Displacing truck traffic to the 407 ETR would, however, result in localised changes to air quality. The potential impacts on human and environmental health should be considered and monitored.

4.0 Conclusions



Congestion in the GTA is clearly an issue. Journey times are long, and stakeholders of all types agree that action must be taken. However, the preferred method for alleviating this congestion (and thus addressing some of the associated negative impacts) is less clearcut.

The idea of Highway 413 was first conceived in 2002 when the idea of the GTA West Corridor was proposed in the Central Ontario Strategic Directions study. It has since been subject to numerous assessments, reviews, suspensions, and cancellations. However, the election of the Progressive Conservative's in 2018 revived the concept and it has been the subject of several debates ever since.

The construction of Highway 413 is a divisive issue. Stakeholders have voiced both support (e.g., representatives from the building sector interested in the possibility of increased urban sprawl) and opposition (e.g., representatives from the farming sector concerned about the loss of valuable farmland) for the project. Arguments for the 413 centre around the reduction in journey times, the alleviation of congestion, and the creation of jobs. Arguments against the 413 focus on the environmental harm associated with its construction and the potential to use the budget for other projects.

To find alternative means for alleviating congestion without creating undue environmental harm, many organisations have proposed a different solution – subsidising the toll for truckers on the 407 ETR. Alongside improving the economic viability of the use of this route for commercial organisations, this approach is anticipated to alleviate congestion for all road users, reduce journey times for truck drivers, cost the Ontario government less to fund, and conserve local natural spaces.

From financial, practical, and environmental perspectives, subsidising the toll on the 407 ETR is a preferable approach to constructing the 413. Although this approach would require an agreement between the Ontario government and the ETR Concession Company Ltd., (and it does not improve accessibility to the city for those living in the western regions of the GTA), it addresses the key aim – to reduce congestion on the 401 – while eliminating the plethora of environmental risks associated with the construction of the 413.

Appendix

A.1.0 The 400-Series Highways

The 400-series designation was first applied to highways in the GTA in 1952.³⁸ It has since been expanded to encompass 17 existing routes, with a further two in discussion (Highway 413, the subject of this report, and the “Bradford Bypass” which is yet to receive its 400-series designation). Amongst this network, and of particular interest to this study, are the 401 and the 407, both east-to-west routes.

A.1.1 Highway 401

Highway 401 is over 800 km long and links the Ontario-Quebec border in the east with the city of Windsor in the west via the City of Toronto. With (at points) 18 lanes of traffic, the 401 is widely considered to be the busiest highway in the world. Average Annual Daily Traffic (AADT) data published by Ontario’s Ministry of Transportation (MTO) indicates that in 2019, the busiest section saw 450,000 vehicles daily.³⁹

Highway 401 is notoriously congested. One well-documented cause is bottlenecking around key junctions during commuter traffic. In an attempt to tackle the issue of urban congestion, over \$8 billion has been invested across Ontario into almost 3,000 infrastructure projects.⁴⁰ Having not yet effectively alleviated the issues with congestion, the province of Ontario plans to continue to invest in highway infrastructure.⁴¹ Such investments may include the potential funding of the proposed Highway 413.

A.1.2 Highway 407

Highway 407 is approximately 150 km long and links Highway 115 in the east with the City of Burlington in the west. It connects with Highway 401 at the eastern edge of Mississauga before running parallel to the 401 as it passes north of Toronto. The section from Burlington to Brock Road in Pickering is privately leased to (and operated by) the 407 ETR Concession Company Ltd. It is officially known as the 407 Express Toll Route (ETR). The section of highway to the east of this is operated by the provincial government and is known as Highway 407 East. Both segments are tolled, but rates and fees vary.

In leasing the highway, the 407 ETR Concession Company Ltd. entered into a Concession and Ground Lease Agreement with the province of Ontario. This agreement specified contractual targets for minimum traffic levels that, if not met, could leave the company open to fines. This target is in place to ensure that the tolls do not discourage usage of the 407 to the extent that the highway fails to alleviate congestion elsewhere. However, levels reportedly fell below the contractual threshold during the COVID-19 pandemic and have not yet recovered.⁴²

A.2.0 Supporters of Highway 413

A.2.1 Government: Progressive Conservatives

Highway 413 was an integral component of the 2018 election and subsequent 2022 re-election campaign of the Progressive Conservative Party of Ontario (PCs). Led by Doug Ford, much of the PCs most recent campaign platform was centred around infrastructure development and making it cheaper and easier for residents to move around the GTA. Essential to this was the continuation of the momentum built around the Highway 413 project in the previous term.

The Highway 413 project proved a wedge issue in the 2022 campaign season. New Democratic, Liberal, and Green parties all opposed its development, leaving it a divisive issue among some voters.⁴³ Consequently, Ford’s PCs viewed the 413 as an opportunity to maintain crucial swing seats in key voting regions such as York, Peel, and Halton. The PCs won 83 seats across Ontario in the 2022 election. This win included 29 of 30 seats across the GTA-905 area, including York, Peel, and Halton regions.⁴⁴ While this

suggests that most voters perceived the policies of the PCs to be better aligned with their priority issues than other political parties, it does not definitively indicate support for the Highway 413 project.

A.2.2 Ontario Municipalities: York

Many municipalities within Ontario (and specifically within the GTA) are publicly opposed to the building of the new highway. However, during a March 2021 Regional Council vote, the municipality of York voted against a motion to withdraw support for the project.⁴⁵

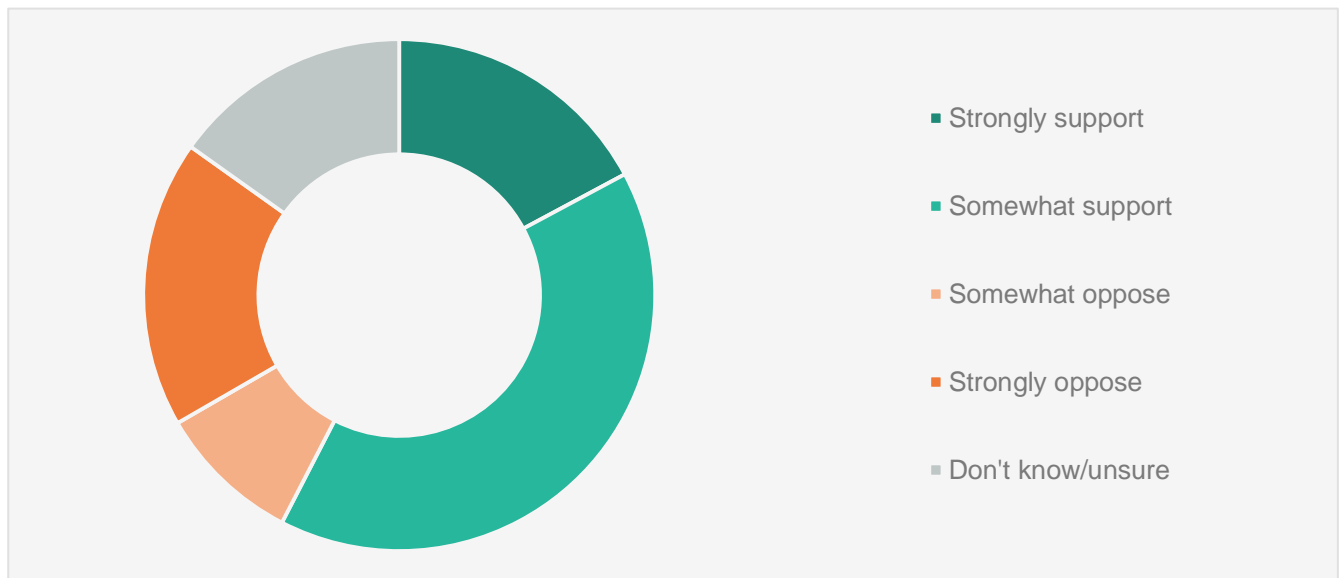
A.2.3 GTA Residents

A poll conducted for the Ontario Provincial District Council of the Labourers' International Union of North America (LIUNA) surveyed 3,009 people to ascertain levels of awareness of, and support for, the Highway 413 project.⁴⁶ The survey included three questions, two of which exclusively asked about the project:

1. "The government of Ontario has committed to building highway 413 along the western area of the Greater Toronto Area. Are you aware of this project?"
2. "Based on what you know about this proposed highway, do you support or oppose the building of the highway?"

The survey found, with a margin of error of $\pm 1.86\%$ 19 times out of 20, that 64% of respondents living in the GTA-905 were aware of the project. It also revealed that 57% of respondents living in the GTA-905 strongly supported or somewhat supported the project. A breakdown of responses to question 1 from those living in the GTA can be seen in Figure A 1.

Figure A 1: Responses to Q1 ("Do you support or oppose the building of the highway?")



While still a majority, responses from the wider Ontario community showed lower levels of awareness (57% said yes, they were aware of the Highway 413 project) and support (54% strongly supported or somewhat supported the project). Alongside variation by region, the survey also provided details of the variation in level of awareness and support by gender and age.

The final question included in the survey asked respondents to consider provincial politics in Ontario and suggest who they would most likely vote for if a provincial election was held the next day. In each region,

and in all but one gender/age bracket, most respondents indicated they would vote for Doug Ford's Progressive Conservative Party of Ontario.

While this survey suggests public opinion may view the Highway 413 project favourably, other surveys and analysis from different sources indicate otherwise. Opposition views are provided in Section 2.3.

A.2.4 The Building and Land Development Sector

Improving transport links into nearby urban hubs (e.g., Toronto) enables residents to live further from the city while maintaining (perceived and real) accessibility. Consequently, the 413 may be seen as an attractive proposition for the building sector, who could reasonably profit from the urban sprawl that is anticipated to accompany its development.

The Building Industry and Land Development Association (BILD), the trade association for home building and land development in the GTA, has vocally supported the highway's development. A blog from President and CEO of BILD in December of 2016 included a statement confirming BILD's support:⁴⁷

"The building and land development industry strongly supports a transportation network like the one that the GTA West Corridor would create. It would allow us to plan and build complete communities in keeping with provincial intensification policies."

A.2.5 The Trucking and Hauling Sector

The GTA is a key hub for trucking and logistics activity, the Peel Region alone features approximately 2,000 trucking companies. While figures are seldom reported, historic traffic flow data suggests that more than 20% of total traffic on some highways in Ontario can be attributed to commercial vehicles and that the provincial 400-series Highways carry most of the commercial vehicle traffic.⁴⁸ This contextualises the extent to which congestion on the 400-series Highways may impact the trucking and haulage sector.

Reducing congestion for truckers is often cited as a key justification for building the 413. The 2012 GTA West Corridor Transportation Development Strategy Report estimated that the new corridor could cut truck delays between inter-regional facilities in half and reduce truck traffic using local roads by approximately 25%.⁴⁹ These figures have garnered support for the 413 from some representatives within the trucking sector. Notably, the Ontario Trucking Association (OTA), one of the largest trucking associations in North America, is publicly vocal in its support for the 413. Indeed, OTA President Stephen Laskowski was quoted within the 2022 Ontario provincial budget plans as saying:⁵⁰

"Highway 413 is not only a fundamental piece of infrastructure, but also a key part of Ontario's success in the future."

A.3.0 Opposition to Highway 413

A.3.1 Government: All PC Opposition Parties

Highway 413 was seen as a wedge issue in the 2022 campaign season. All opposition parties to the PCs (the New Democratic Party, the Green Party, the Liberal Party) pledged to cancel the project revived by Doug Ford in the previous term if elected. In a May 2022 debate, all main party leaders publicly denounced Highway 413 plans:⁵¹

- Mike Schreiner, leader of the **Green Party**, stated that the project would be a "fiscally and environmentally reckless highway".

- Steven Del Duca, leader of the **Liberal Party**, said that the project “makes no sense whatsoever” and that “it’s not going to do anything for [the people in the area].”
- Andrea Howarth, leader of the **New Democratic party**, called building Highway 413 “the wrong thing to do”, adding that “what we don’t need is another massive highway to mansions that nobody can afford”.

The Highway 413 project was undoubtedly a divisive issue among politicians. Despite highly vocalised arguments against its development, the voting majority chose to support the only party in favour of the 413, the PC’s. It should be noted, however, that the three opposition parties also had other common policies that differed to those of the Progressive Conservative’s. Consequently, a vote against the Green, Liberal, or New Democratic parties should not be considered synonymous with a vote for Highway 413.

A.3.2 Ontario Municipalities: Most, Including Ontario Good Roads Association

Most municipalities within Ontario have publicly opposed the Highway 413 project. Among those who have voted to withdraw endorsement for the highway are Mississauga, Vaughan, Halton Hills, Halton Region, Orangeville, Peel Region, and Toronto.⁵²

In a March 2021 motion discussing the topic, Toronto City Council stated that the highway’s “construction threatens critical agricultural lands, sensitive waterways, protected Greenbelt lands and conservation areas, as well as tens of thousand of jobs and billions in agriculture-related economic activity”.⁵³ A press release from Mississauga City Council in February of the same year drew attention to the fact that “too many experts and organizations have come out against this planned highway”, concluding that “today we stand with them”.⁵⁴

In an article in the Ontario Good Roads Association (OGRA) magazine “Milestones”, Summer 2021, its manager of public policy and government relations, Thoman Barakat, expressed concern about the Highway 413 project, including high financial cost, environmental impacts, the effects of induced traffic demand and the encouragement of sprawl development, instead, he recommended use of the currently-underutilized Highway 407, as well as more funding for maintenance of existing assets (“fix it first”)⁵⁵

A.3.4 GTA Residents

Since its revival in 2018, there have been several displays of residents in the GTA actively opposing the development of Highway 413. This opposition has been evidenced through a range of mediums. The following section provides a selection of examples.

The David Suzuki Foundation, a Canadian not-for-profit working to conserve and protect the natural environment, created a petition asking the federal minister of environment to stop the project. As of August 2023, the petition had accrued more than 62,000 signatures.⁵⁶

A poll of 1,000 GTA residents was undertaken by EKOS to determine attitudes of GTA residents to the proposed highway. With a margin of error of $\pm 3.1\%$ 19 times out of 20, it revealed that 85% of respondents were aware of the proposal and that less than one third of respondents (29%) were in support of the highway’s development. The survey also asked respondents to comment on the extent to which they believed the 413 would reduce the amount of time they spent commuting each week. Over three quarters (77%) of respondents answered that they believed the extent would be low.⁵⁷

In addition to organised petitions and surveys, numerous grassroots groups have emerged to protest Highway 413’s development. Examples include:

- **Stop Sprawl HamOnt** and **Stop Sprawl Ontario** community groups seeking to prevent urban sprawl across the Greenbelt.⁵⁸
- **The Community Climate Council's** #Stopthe413 campaign that is educating residents about the negative environmental impacts associated with the 413 and encouraging them to act.⁵⁹
- **Grand(m)others Act to Save the Planet** (GASP), a grassroots group of “grandmothers and grand‘others’ who care deeply about the world” and are committed to advocating for social and climate justice. GASP has held numerous rallies against the 413.⁶⁰
- **The Wellington Water Watchers** whose aim is to protect nature and waterways. This grassroots campaign is opposing the 413 that would “pave over important farmland, forests, rivers, and a section of the Greenbelt”.⁶¹

A.3.5 The Trucking and Hauling Sector

Despite the potential for reducing congestion for the trucking and hauling sector often referenced as a key benefit of building the 413, many industry representatives disagree with the proposed project. Instead, they seek alternative approaches that achieve the same outcome through different means. For example, in a May 2023 webinar, Mike Millian, President of the Private Motor Truck Council of Canada (PMTCC), discussed that while new infrastructure is needed, increasing the number of lanes and building new highways will “not fix it alone”. Millian supported “using the vastly underutilized already-existing Highway 407 and subsidizing 407 use for trucks to divert through traffic from Highway 401” and emphasized that “we need better utilization of what we have”.⁶²

A.3.6 Other Organisations

Alongside the organisations and sectors discussed previously, numerous others have publicly voiced their opposition to the highway.⁶³ This includes environmental groups (e.g., Halton Environmental Network, the Wilderness Committee, Rescue Lake Simcoe Coalition, Sustainable Mississauga), representatives from the farming sector (e.g., National Farmers' Union-Ontario), community coalitions (e.g., the Federation of Urban Neighbourhoods), other advocacy groups (e.g., Transport Action Ontario, Gravel Watch Ontario), and regulatory authorities (e.g., the Toronto and Region Conservation Authority).

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