Algonquin to Adirondacks Collaborative
P.O. Box 88
Landsdowne, ON,
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May 26th, 2025

Re: Comments on Highway 401 Planning Study from Mallorytown to Brockville

To the Ontario Ministry of Transportation and Stantec Consulting Ltd.:

The Algonquin to Adirondacks (A2A) Collaborative is dedicated to protecting and enhancing the ecological connectivity of the region between Algonquin Park in Ontario and Adirondack Park in New York State. Highway 401 critically bisects this region, meaning any proposed changes to the highway are of paramount importance to our organization and represent both an opportunity and a challenge for achieving an ecologically connected landscape. Therefore, the A2A staff and Board of Directors are providing these comments on the Highway 401 Planning Study from Mallorytown to Brockville. Thank you for the opportunity to contribute during this initial planning phase.

Ecological Imperative

As noted in our Right to Roam Report (Black et al., 2023), we believe it is critical to maintain and enhance ecological connectivity within the Frontenac Arch, a globally significant UNESCO Biosphere Reserve. This area serves as a fundamental link between the Appalachian Mountains and the boreal forests of Northern Ontario, supporting a rich diversity of species, many of which are at risk. The proposed expansion of Highway 401, with its plans for an interim six and an ultimate eight lanes, would create disastrous habitat fragmentation and an impenetrable barrier to wildlife moving through the area without thoughtful mitigation strategies.

Our specific concerns regarding highway expansion between Brockville and Mallorytown center on the **Jones Creek area**, which represents arguably the most intact north-south wildlife corridor across the Frontenac Arch. Our Circuitscape analyses (Black et al., 2023) identify this corridor as a crucial, albeit rare, pocket of high landscape connectivity between the Thousand Islands National Park and Highway 401. We believe this area offers the most promising opportunity for the safe movement of a wide array of species, including deer, fisher, bobcats, lynx, wolves, and bears. Alarmingly, Jones Creek currently

experiences a high rate of wildlife mortality, underscoring the urgent need for effective mitigation strategies at this critical site.

Economic & Safety Imperative

There are also compelling economic and safety arguments for the proactive integration of wildlife crossing structures between Brockville and Mallorytown during highway expansion.

Wildlife-vehicle collisions (WVCs) result in significant societal costs. Huijser et al. (2009) did a conservative calculation of the average cost per wildlife vehicle collision (i.e., human fatalities and injuries, vehicle damage), which ranged from $6,617 (deer) to $30,769 (moose). The average cost of building and maintaining a wildlife passage with fencing at the time of the study was $18,123 per year. The above-mentioned research showed that a threshold of 3.2 deer-vehicle collisions per km per year was sufficient to warrant installing fencing and a wildlife underpass. The threshold value for collision rates with moose is even less, at 0.7 collisions per km per year.

It is important to note that this research only takes into account direct costs. If we were to include the full cost to society of WVCs, including the burden on the healthcare system, or the economic delays of traffic slowdowns on Hwy 401 resulting from collisions, the threshold would be even lower. Given this research, many studies have shown that thoughtfully placed wildlife crossing structures pay for themselves in twelve to twenty years (Skroch, 2022).

The cost-effectiveness of incorporating wildlife crossings during initial highway construction, rather than retrofitting them later, is also substantial. Renee Callahan, Executive Director of ARC Solutions, an interdisciplinary partnership working to facilitate new thinking, methods, materials and solutions for wildlife crossing structures aptly notes:

> *"In many cases, when the construction crew, equipment, and traffic diversion efforts are already in place, the cost of a wildlife overpass is a relatively minor addition to the total project expenditure. For example, one project in Nevada was able to integrate a wildlife crossing overpass for bighorn sheep for approximately $1 million in incremental cost during construction of portions of a new roadway as part of US Interstate 11 - in contrast, a stand-alone retrofit of an existing highway to include a similarly-sized overpass has been estimated to cost at least $10 million - 10x times higher! As a result, including properly-sited highway mitigation measures for wildlife as part of a planned roadway upgrade is an optimal window to cost-effectively make our roads safer for both motorists and wildlife, and should be taken advantage of whenever and wherever possible."* (R. Callahan, personal communication, May 2025).

Therefore, investing in wildlife mitigations during the proposed Highway 401 expansion is not only an ecological imperative but also a fiscally responsible decision that will ultimately save taxpayer dollars and, most importantly, save lives.

Recommendations

To ensure that the infrastructure upgrades minimize environmental impacts and retain the economic and safety benefits, we respectfully offer the following recommendations for your full consideration:

- **Prioritize the open span bridge option at Jones Creek** with a thoughtfully designed underpass. The underpass should be at least 4.5m tall and sufficiently wide to encompass the maximum

riparian area of Jones Creek and a portion of adjacent upland habitat, with a minimum width of 12m. This size of underpass would allow light penetration, large animal passage, and the incorporation of natural terrestrial ledges by including the riparian zone and banks of the creek and adjacent upland habitat. Salvage material such as logs, root wads, and rocks should be used to incorporate cover objects and microhabitat features within the Jones Creek underpass. Fencing should be used to guide animals into the underpass, following the specifications in the Right to Roam report.

- In other areas of the planning study, carefully limit potential environmental impacts by selecting alternatives that avoid roadway expansion into Parks Canada Land and/or intact forested areas.
- Widen or replace existing culverts where necessary to facilitate the unimpeded passage of larger animals and improve light penetration, including naturalized ledges for small animals.
- Apply a long-term, climate-resilient lens to all infrastructure upgrades, proactively accommodating increased wildlife movement and severe weather patterns.

The A2A Collaborative Board of Directors firmly believes that these recommendations will help position Ontario as a leader in creating a transportation system that co-exists with nature. The Highway 401 expansion through the Frontenac Arch presents a highly visible and impactful opportunity to demonstrate this leadership by integrating critical wildlife crossing infrastructure.

Thank you for considering these comments as a vital part of your planning process. We look forward to seeing the next stage of designs that truly reflect the ecological significance of this landscape and ensure its connectivity for wildlife for generations to come.

Sincerely,

Jessica Lax

Executive Director, Algonquin to Adirondacks (A2A) Collaborative
On behalf of the A2A Collaborative Board Members and Staff

Sources

Black, K., Danby, R., & Urquhart, O. (2023). The Right to Roam: A Strategy to Reconnect a Continental Wildlife Pathway in the Frontenac Arch. https://www.a2acollaborative.org/uploads/7/6/8/5/7685208/a2a_road_ecology_report.pdf

Huijser, M. P., Duffield, J. W., Clevenger, A. P., Ament, R. J., & McGowen, P. T. (2009). Cost-benefit analyses of mitigation measures aimed at reducing collisions with large ungulates in North America: A decision support tool. *Ecology and Society, 14*(2): 15. https://www.ecologyandsociety.org/vol14/iss2/art15/

Skroch, M. (2022, February 1). *Out West, building wildlife crossings brings return on investment*. The Pew Charitable Trusts.

https://www.pewtrusts.org/en/research-and-analysis/articles/2020/02/25/out-west-building-wildlife-crossings-brings-return-on-investment