THE IMPORTANCE OF INTEGRATED CORRIDOR MANAGEMENT AT BORDERS AND THEIR SURROUNDING COMMUNITIES

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ABSTRACT

The Transportation field is moving forward with an Integrated Corridor Management (ICM) approach whose aim is to manage the highway corridors as a multimodal system, and allows professionals to introduce operational decisions for the benefit of the corridor as a whole. Through this approach, travelers will be able to make educated decisions in choosing their method and route of travel, allowing highway corridors to realize significant improvements in the efficient movement of people and goods.

Border crossing locations are receiving attention from various stakeholders and partnerships, and substantial funding is being provided with the aim of implementing an Integrated Corridor Management approach at borders. The efficient flow of border access points are of particular importance to the economies of adjacent countries as it is the entry point of commuters, travelers, and commercial trade between countries.

Current technology being utilized involves the use of Bluetooth readers and vehicle detectors, which help determine service flow rates, cars in queue, and wait time information. With this technology however, there are often long waits, heavy congestion, unpredictable crossing times, and an imbalance between different crossing locations, negatively affecting the environment, quality of life, and economic competitiveness.

These problems often arise due to a lack of information for commuters, capacity constraints, and limited crossing options, all which can be mitigated through an Integrated Corridor Management approach.

An Integrated Corridor Management approach will eventually be implemented at borders, which will include policies and procedures to address recurring and nonrecurring congestion, utilizing advanced modeling, and a data-driven decision support tool to provide relevant information to travelers. When properly implemented, these methods combined with continuous performance monitoring will allow the flow of commuters, travelers, and commercial trade through borders to be seamless and efficient.

1. EXECUTIVE SUMMARY

Integrated Corridor Management is an emerging system that deals with the management of congestion on highway networks and arterial roads by using advanced technologies and innovative practices. It is a promising tool in the congestion management toolbox, and requires proactive, joint, multimodal management of existing transportation infrastructure along a corridor by system operators and managers. The idea of Integrated Corridor Management is to manage the transportation corridor as a system, rather than the more traditional approach of managing individual assets, seeking to leverage under-utilized corridor capacity such as parallel routes, transit services, and single occupant vehicles to help manage congestion. Better “visibility” across the corridor’s transportation network gives transportation managers and operators more choices for managing travel demand and can help to provide more actionable traveler information. Integrated Corridor Management has the potential to be extremely effective at border crossings, as they represent bottlenecks for the efficient flow of goods and commuters across highway networks. Through the use of existing and emerging ITS technologies, Integrated Corridor Management will allow travellers, enforcement agencies, and emergency services to both receive and provide real time traffic flow and incident information, so that commuters can choose optimal routes and departure times, and agencies can efficiently allocate resources, ultimately contributing towards the success of the economies surrounding the border.
In terms of specific topics that will be discussed and presented, first the importance of efficient border crossings will be highlighted by discussing some of the Ontario-US border statistics surrounding trade, and tourist utilization, as well as the negative impact that inefficient border crossings have on the economy. A brief overview of current ITS tools, strategies and systems currently utilized at Ontario borders will also be covered, with a look at what is currently missing.

A summary and description of Integrated Corridor Management will be given, and some of the ICM strategies that can be utilized at border crossings and their associated benefits will be discussed. In order to implement these ICM strategies, many partnerships and collaborations must be established with various stakeholders. These types of partnerships and collaborations will be defined, and the difficulties and roadblocks associated with establishing them will be covered.

What will then be highlighted are the benefits associated with successfully implementing an Integrated Corridor Management approach at borders, and we will conclude by discussing what types of projects the Ministry of Transportation is currently undertaking in the area of Integrated Corridor Management at borders, and what their plan is for the future.