

Niagara International Transportation Technology Coalition

Regional Concept for Transportation Operations

NITTEC

- Multi-Agency Transportation Operations Coalition
 - 14 Member Agencies with 15 Affiliate Members in Canada & U.S.
 - Established in 1995 through Memorandum of Understanding
 - Council and Committee governance with agency leadership
 - Centralized 24/7 operations and traffic management services for bi-national region



NITTEC Membership

- Transportation Agencies
- Public Safety and Border Enforcement
- Emergency Services
- Recovery and Environmental Conservation



Project Team

- NITTEC Members and Stakeholders
- Eng-Wong, Taub & Associates
- Bergmann Associates
- McCormick Rankin Corporation

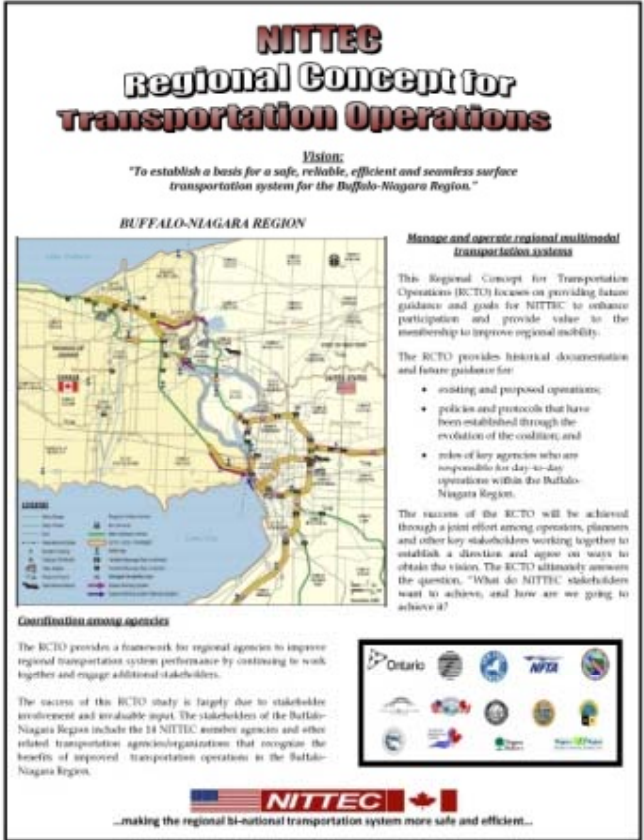


Completed in January 2010



RCTO Purpose

- Develop management tool to identify and document current practices
- Assist in planning and implementing operational strategies
- Formalize existing and proposed collaboration among members / stakeholders
- Provide future guidance and goals for the Coalition to enhance participation and provide value to the membership
- Provide a framework for regional agencies to improve regional transportation system performance by working together



NITTEC
Regional Concept for
Transportation Operations

Vision:
"To establish a basis for a safe, reliable, efficient and seamless surface transportation system for the Buffalo-Niagara Region."

BUFFALO-NIAGARA REGION

Manage and operate regional multimodal transportation systems

This Regional Concept for Transportation Operations (RCTO) focuses on providing future guidance and goals for NITTEC to enhance participation and provide value to the membership to improve regional mobility.

The RCTO provides historical documentation and future guidance for:

- existing and proposed operations;
- policies and protocols that have been established through the evolution of the coalition; and
- roles of key agencies who are responsible for day-to-day operations within the Buffalo-Niagara Region.

The success of the RCTO will be achieved through a joint effort among operators, planners and other key stakeholders working together to establish a direction and agree on ways to obtain the vision. The RCTO ultimately answers the question, "What do NITTEC stakeholders want to achieve, and how are we going to achieve it?"

Coordination among agencies

The RCTO provides a framework for regional agencies to improve regional transportation system performance by continuing to work together and engage additional stakeholders.

The success of this RCTO study is largely due to stakeholder involvement and invaluable input. The stakeholders of the Buffalo-Niagara Region include the 14 NITTEC member agencies and other related transportation agencies/organizations that recognize the benefits of improved transportation operations in the Buffalo-Niagara Region.

Logos:

- Ontario
- NITTEC
- Other regional agencies and organizations

NITTEC ...making the regional bi-national transportation system more safe and efficient...




RCTO Development

- RCTO Vision
- RCTO Operational Categories and Objectives
- Relationship of the RCTO to Current NITTEC Processes
- Recommendations and Action Plan

Improvement of operations through the development of goals and objectives

Eighty one (81) candidate goals and objectives for the Buffalo-Niagara Region were developed through vetted discussions with members and stakeholders using the goals and objectives identified by the 2007 Strategic Plan. Short-term (less than 5 years) and long-term (5-10 years) goals were developed for the RCTO that focused on improvement in the following five operational categories: Agency Coordination, Traveler Information, Mobility (Airport, Border, Freeway, and Transit), Incident Management, and Policy and Procedures.



RCTO Operational Categories and Goals				
Agency Coordination	Traveler Information	Mobility (Airport, Border, Freeway, Transit)	Incident Management	Policy and Procedures
5 short term 5 long term	7 short term 7 long term	20 short term 20 long term	15 short term 16 long term	2 short term 2 long term

Implement RCTO Action Plan


A RCTO Action Plan was developed, consisting of 14 project recommendations separated into five categories. The table below lists the one project recommendation for each category.

Category	Project Recommendation
Expansion and Continued Integration of TRANSSMT	• Expansion of TRANSSMT along the approaching road network to the United States from the Canadian side
Web Page Pre-Trip Planning Enhancements and Multi-Modal Integrations	• Further expansion of the NITTEC website, which provides "speed limit" information of the road network. (Early work)
Strategically located VMS for Border Crossing Traffic Information	• Expansion for a VMS on the Niagara-bound QEW in advance of the QEW/403 split. Additionally, consideration could be given for a VMS on the Niagara-bound QEW in advance of the QEW/403 split.
Communication Links to Other Control Centers	• Initiation of a communication study to identify all current and future needs, and the feasibility of various communication options (i.e. bid party, wireless, leased or owned satellite) for the future needs of ATIS data exchange and sharing of control of border related field devices. (Early work)
Development of Agency Coordination Enhancement Plans	• A Participation and Involvement Strategy and Action Plan can be developed, to further enhance participation of agencies.

An Implementation Plan was developed that details action items needed to complete the project recommendations and lists a responsible NITTEC Committee or other partner who should be involved with implementing the proposed projects identified in the Action Plan.

Support RCTO Activities

The RCTO focuses on taking the objectives and goals identified to develop areas for improvements and enhancements, and make recommendations for short-term and long-term projects. Moving forward, the RCTO recommended Action Plan will enhance and advance the NITTEC mission. The existing and future relationships among NITTEC members and stakeholders are essential in supporting RCTO activities needed to improve and achieve safe integrated operations in the Buffalo-Niagara Region.



...making the regional bi-national transportation system more safe and efficient...

Steps Taken

- Define Vision
- Identify Goals and Objectives
- Conduct Interviews
- Document Existing Relationships
- Identify Areas for Improvement
- Short-Term and Long-Term Action Plan
- Implementation Plan
- Action Items



Vision

To establish a basis for a safe, reliable, efficient, and seamless surface transportation system for the NITTEC region



Operational Categories

- Agency Coordination
- Traveler Information
- Mobility (Arterial, Border, Freeway, Transit)
- Incident Management
- Policy and Procedures

<u>Category</u>	<u>Objective</u>
Agency Coordination	➤ Improve NITTEC participation
Traveler Information	➤ Provide easily accessible, coordinated, clear and concise, real-time information
Mobility (Arterial, Border, Freeway, Transit)	➤ Minimize travel delay
Incident Management	➤ Establish incident classifications and severity guidelines
Policy and Procedures	➤ Establish and implement applicable policies, procedures, and practices



Goals and Performance Measures

Category	Objective	Short Term Goal (less than five years)	Long Term Goal (five to 10 years)	Performance Measure
Agency Coordination	Improve inter-agency and cross-jurisdictional coordination and collaboration during highway incidents	Center-to-center (C2C) communications is functioning among all transportation related agencies in the region	Center-to-center (C2C) communications is functioning among all transportation related agencies in the region	Evaluate the use of established center-to-center communication links
Traveler Information	Promote seamless operation among modal choices	All surface modes are integrated into a traveler information system	All surface modes are integrated into a traveler information system	Percentage of modes integrated into a traveler information system.
Mobility (Arterial, Border, Freeway, Transit)	Promote use of expedited clearance programs and systems	The number of vehicles using E-ZPass has increased by 15 percent	The number of vehicles using E-ZPass has increased by 25 percent	Monthly number of vehicles using the E-Z Pass program
Incident Management	Establish incident classifications and severity guidelines	Develop agreed upon definitions for minor, intermediate, and major incidents	Utilize agreed upon definitions for minor, intermediate, and major incidents	Incident definitions agreed upon and universally used
Policy and Procedures	Establish and implement applicable policies, procedures, and practices	All policies, procedures, and practices dealing with the RCTO are in place	All policies, procedures, and practices dealing with the RCTO is utilized by all stakeholders	The number of stakeholders using policies, procedures, and practices dealing with the RCTO



RCTO Action Plan

- 14 project recommendations separated into five categories

Category	Project Recommendation
<i>Expansion and Continued Integration of TRANSMIT</i>	<ul style="list-style-type: none"> • Expansion of TRANSMIT along the approaching road network to the United States from the Canadian side.
<i>Web Page Pre-Trip Planning Enhancements and Multi-Modal Integrations</i>	<ul style="list-style-type: none"> • New functionality could be added to provide a pre-trip (non real-time i.e. based on schedule information) planning tool for the various modes of transportation of the area (i.e. transit, shuttle bus, rail, etc.).
<i>Strategically located VMS for Border Crossing Traffic Information</i>	<ul style="list-style-type: none"> • The control of VMS on the Niagara-bound QEW in advance of the QEW/405 split and the QEW/420 split would be under the jurisdiction of the MTO in conjunction with NITTEC would require enhanced Center-to-Center (C2C) communications to ensure the flow of information between the two control centers.
<i>Communication Links to Other Control Centers</i>	<ul style="list-style-type: none"> • Initiation of a communication study to identify all current and future needs, and the feasibility of various communication options (i.e. 3rd party, wireless, leased or owned landline) for the future needs of ATMS data exchange and sharing of control of border related field devices. <i>(Early win)</i>
<i>Development of Agency Coordination Enhancement Plans</i>	<ul style="list-style-type: none"> • The development of a more uniform method of collecting and reporting incident information should be established that could range from a standardized key list of information to be collected and nomenclatures to be used, to a standardized list of procedures in responding to incidents.



RCTO Action Plan

RCTO		Service Categories			
Category	Objective	Construction and Event Planning & Coordination	Operational Services	ITS Deployment & Operations	Other Services
Mobility (Arterial, Border, Freeway, Transit)	Minimize travel delay	Coordinate and analyze construction activities from the perspective of travel demand vs. capacity (i.e. traffic balancing). (CC)		Recommend upgrades to arterial signal equipment, coordinate signals, and integrate priority corridors within the expressway systems. (T&S, NITTEC staff, municipal partners)	
	Promote use of expedited clearance programs and systems		Continue to participate in the Incident Management proactive and post incident review.(WNYIM and OIM)		
	Enhance transit operations		Promote the establishment of transit operations to and from all airports. (RTCMC, NITTEC staff, transit partners)		
	Reduce travel time uncertainty			Increase the amount of locations where travelers can obtain travel time information. (T&S, NITTEC)	



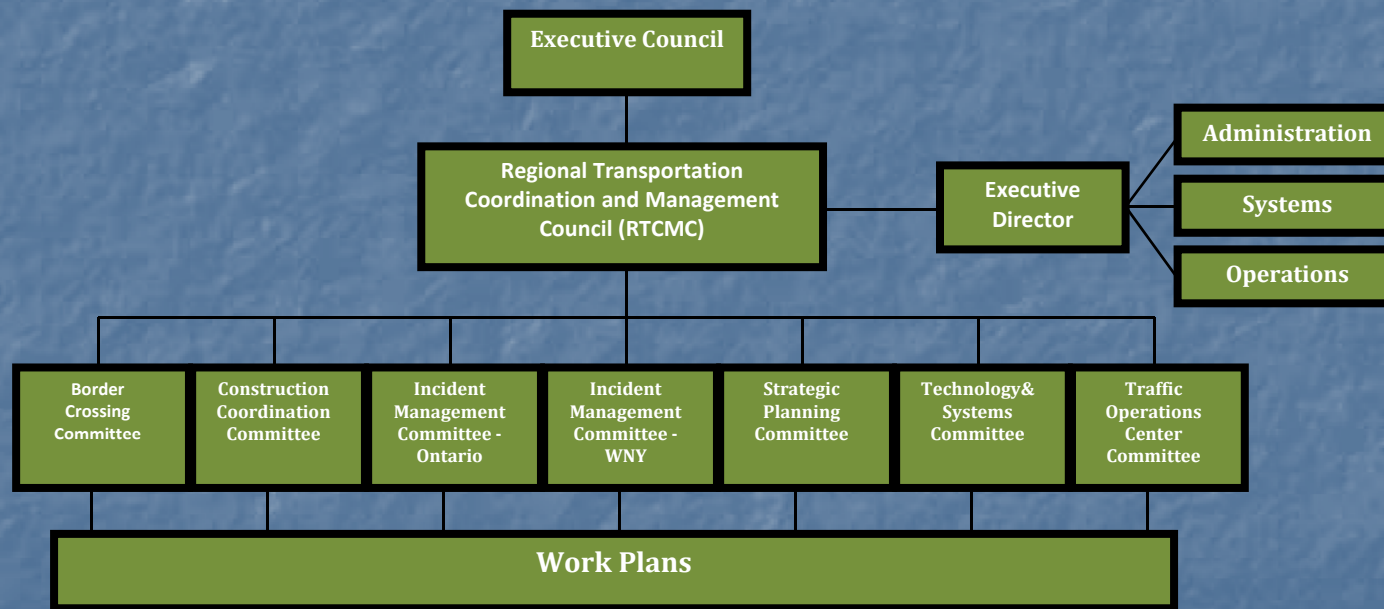
RCTO Action Items

Priority (High, Medium, Low, Completed)	Action Items	Short Term Goal (less than five years)	Performance Measure	Lead Committee	Supporting Committee	Resources Required				Comments
						Staff / Committee	Consultant	Operating \$	Capital \$	
Agency Coordination - Improve NITTEC Participation										
H	Develop a Participation Involvement Strategy & Action Plan to enhance participation of agencies. The Plan should identify formal 'champions' at senior level of agencies, set agency roles, and establish communication methods.	75 percent of all transportation related agencies participate in and contribute to NITTEC activities.	Yearly percentage of transportation related agencies involved in NITTEC activities.	RCTMC	SP	✓				Strategy & Action Plan Documentation.
		All policy and general member agencies attend 75 percent of appropriate Council and Committee meetings.	Attendance of policy and general member agencies at appropriate meetings.	RCTMC	SP	✓				
Traveler Information - Provide easily accessible, coordinated, clear and concise, real-time information										
H	Continue expansion of TRANSMIT on the website to provide information regarding the road network. Further refinement and/or fine-tuning of the algorithms that calculate speeds may be required to improve the reliability and accuracy of the information.	The information from all agencies is disseminated across all available modes (web, television, radio, telephone, new technologies, etc.).	The number of available traveler information modes per year.	TS		✓	✓		✓	Effort underway.
Mobility (Arterial, Border, Freeway, Transit) - Minimize travel delay in construction zones										
M	Establish delay limitation associated with construction and monitor construction zone travel time and delay.	Limit the percent increase in average travel time in construction zones.	Compare non-delayed travel times with delayed travel times in construction zones.	CC	TOC	✓			✓	Develop Concept of Operations for construction planning tool.
Incident Management - Establish incident classifications and severity guidelines										
H	Develop incident classifications and severity guidelines.	Develop agreed upon definitions for minor, intermediate, and major incidents.	Incident definitions agreed upon and incident definitions universally used.	WNYIM & OIM	TOC	✓				Review and confirm protocols.
		Define incident severity guidelines based on: incident severity, field conditions, resources needed, and estimated incident duration.	Incident severity guidelines are defined.							
Policy and Procedures - Establish and implement applicable policies, procedures, and practices										
H	Put in place all policies, procedures, and practices related to the RCTO.	All policies, procedures, and practices dealing with the RCTO are in place.	The number of stakeholders using policies, procedures, and practices dealing with the RCTO.	RTCMC	ALL	✓				



Implementation

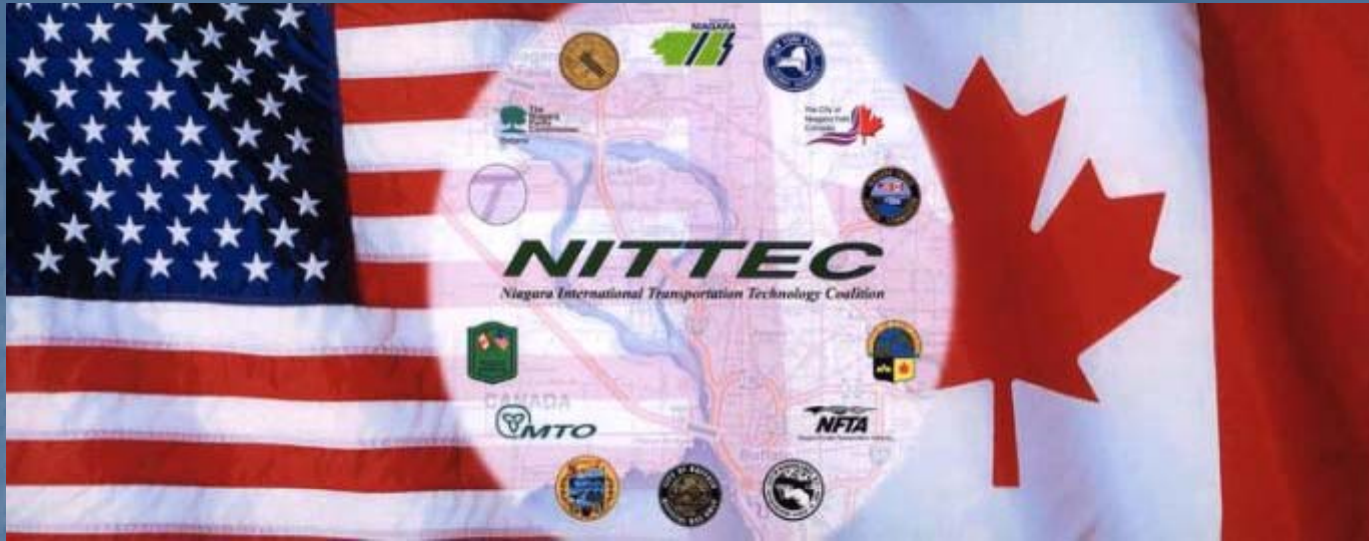
- Action Items incorporated into Committee Work Plans
- Yearly Review of Action Items and Work Plans



Outcome

- Success is due to stakeholder involvement and invaluable input
- Stakeholders of the Region recognized the benefits of improved transportation operations in the Buffalo-Niagara Region
- Challenge to keep Members / Stakeholders focused





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