Executive Summary

Since the events of September 11th, 2001, there has been an increased focus on transportation security in Canada and the U.S, particularly as it relates to the prevention of terrorist attacks. A number of measures have been introduced by Transport Canada, the Canada Border Services Agency, and other federal departments within Canada. Similarly, the U.S. has introduced a number of measures, many of which impact travel between the two countries. These measures, while increasing transportation security, have also resulted in costs to transportation stakeholders.

In September 2005, Transport Canada commissioned an empirical investigation into the direct operating and capital costs, as well as indirect impacts, imposed by the Canadian and U.S. security measures introduced after September 11th, 2001 and in place before April 2005. This study examines the impact on Canadian air carriers, airports, rail carriers, marine port authorities and facilities, marine shipping lines, and freight forwarders. An earlier study which examined the impact of security measures on the Canadian trucking industry has been incorporated into this report for completeness.[1] Over 50 in-depth interviews were conducted and an additional 136 survey responses were received from the above key stakeholder groups. In most cases, the interview and survey respondents represented a fairly high proportion of the traffic carried by their respective modes. For most modes, the results from the respondents have been scaled up to estimate the impact on the entire Canadian transportation industry.[2]

Summary of Impacts on Individual Modes

- **Air carriers** reported increased staffing costs related to API/PNR data requirements, U.S. nofly and selectee lists, special requirements for transborder flights, Hold Baggage Screening, and positive baggage match on domestic flights. Major capital costs included reinforcing cockpit doors, which was largely funded by Transport Canada, and computer system costs. Lost ticket revenues were reported as a result of accommodating Aircraft Protective Officers on aircraft and from the imposition of the Air Traveller Security Charge. Increases in delays and in scheduled aircraft turnaround times due to new security requirements resulted in reduced aircraft utilisation and loss of scheduling efficiency for some airlines. The operating cost impacts reported by Canadian air carriers were compared against a similar study of European air carriers commissioned by the European Union, and were found to be of a similar magnitude.

- **Airports** reported increases in staffing costs as a result of requirements for enhanced restricted access controls and non-passenger screening. Substantial capital cost expenditures were reported by the airports, related primarily to accommodating Hold Baggage Screening and Pre-Board Screening facilities, and also requirements for access controls to restricted areas. Approximately 89% of these capital costs were funded by the Canadian government.

1 *The Cumulative Impact of U.S. Import Compliance Programs at the Canada/U.S. Land Border on the Canadian Trucking Industry*, DAMF Consultants Inc. and L-P Tardif & Associates Inc., May 24, 2005.

2 The results from the marine shipping lines have not been scaled-up.

The operating and capital cost impacts reported by Canadian airports were compared against a similar study of European airports commissioned by the European Union, and were found to be of a similar magnitude.

- **Freight rail carriers** reported incremental operating and capital costs, primarily driven by U.S. security measures for transborder traffic. Freight rail carriers reported that the U.S. VACIS program had led to increased cross-border transit times and more delays. Canadian measures had virtually no cost impact on freight rail carriers. Major capital costs included infrastructure upgrades to support VACIS, cameras mounted onto locomotives, computer system upgrades, CCTV and other security equipment. Approximately 10% of capital costs were funded by the Canadian government.

- **VIA Rail** reported hiring additional security department staff, as well as undertaking a number of training programs, including mock drills. Capital costs, 80% of which was funded by government, included IT system upgrades and the installation of security cameras at stations.

- **Port authorities and marine facilities** reported that cost impacts were largely related to the Marine Transportation Security Regulations (MTRS) introduced in June 2004, including the designation of restricted areas and installation of procedures/equipment to restrict access to these areas, and the effective monitoring of ports/facilities through surveillance equipment, lighting and security guards/patrols. Substantial capital costs were also reported for facility modifications, computer system upgrades and security equipment, of which 39% were funded by the Canadian government.

- **Marine shipping lines** reported cost increases related to wage increases for staff designated with security duties, administration hours related to MTSR security requirements, collating and transmitting Advance Commercial Information to the CBSA, and staff training. The largest operating cost item reported by the shipping lines was security surcharges imposed by port authorities. Major capital cost items included upgrades to vessels and computer systems. No funding from the Canadian government was reported.

- **Freight forwarders** reported additional staff hours and positions, as well as increased wages, related to the monitoring and handling of Canadian ACI and U.S. Automated Manifest System data requirements. Freight forwarders also cited security surcharges imposed by port authorities and carriers, as well as computer upgrades to meet ACI/AMS requirements and to improve overall system security. A number of respondents also reported expenditures on CCTV and electronic access controls. No funding from the Canadian government was reported.

- **Cross border trucking** impacts of U.S. security measures on the Canadian trucking industry were examined in a separate study. The surveyed trucking companies reported increased border delays of 1 to 1.5 hours per trip due to increased queuing times related to the electronic pre-filing of shipment information to the U.S. CBP. Increased administrative staff costs related to the electronic pre-filing of shipment information were also reported. Major capital costs included obtaining FAST cards and security upgrades to facilities and computer systems.

Summary of the Annual Operating Cost Impacts

- The combined direct and indirect operating cost impact on the entire Canadian transportation industry is estimated to be $315 - $549 million per annum.
- Cross border trucking accounts for approximately 80% of the total annual cost impact. The large trucking cost impact is due largely to reported delays of 1-1.5 hours per trucking movement. No equivalent magnitude of delay-impacts were observed for any of the other modes.
- The next largest direct and indirect operating impact was on airports ($27 - $28 million per annum), followed by air carriers (approximately $14 - $22 million per annum).
- A total of $2.8 – $3.4 million of federal government funding was received towards the annual operating cost impacts, approximately 1% of the total direct and indirect annual impact.
- Including cross border trucking, 86% ($264 - $483 million) of the total direct and indirect annual impact was attributed to U.S. security measures. Approximately $46 - $58 million per annum was attributed to Transport Canada measures, 13% of the total impact. CBSA measures accounted for $5 - $7million per annum, about 1% of the total annual cost impact.
- Excluding cross border trucking, 66% of the annual direct and indirect operating cost impact was attributed to Transport Canada measures. U.S. measures accounted for 26% of the total impact ($19 - $22 million), and CBSA measures accounted for 8% of the total impact.
- As a proportion of 2004 annual revenues, the combined direct and indirect operating cost impacts were greatest for cross border trucking (3-5% of annual revenues), port authorities (2-4% of annual revenues), airports (2% of annual revenues) and marine facilities (1-2% of annual revenues). For air carriers, rail carriers and freight forwarders, the cost increases represented less than 1% of total annual revenues.

Summary of Capital Cost Impacts

- In addition to the annual cost impacts, a total of $511 - $608 million in capital costs was expended between September 2001 and April 2005, across all modes.
- The capital costs at airports account for approximately 60% of the total capital cost impacts, reaching $319 - $337 million, of which 89% was funded by the Canadian federal government.
- Overall, the Canadian federal government funded 61% of capital costs. Total government funding of capital costs is estimated at $328 - $355 million.
- Approximately three quarters of the total capital costs were attributed to Transport Canada measures ($402 -$446 million), and nearly a quarter was attributed to U.S. measures ($105 - $156 million). Only $3.3 - $4.1 million of the capital costs were attributed to CBSA measures, around 1% of the total.