

NEEDED: INFRASTRUCTURE RESILIENCE STRATEGIES FOR MAJOR LAND CROSSINGS DONALD ALPER¹

Problem and Context

The enormous flow of cross-border trade and people is a major economic driver in North America. While the economic data is powerfully impressive, it is widely known and will not be repeated here. What is perhaps less widely understood are the ways North American economic flows relate to border infrastructure, particularly at major land ports of entry which handle most commercial and people transactions.²

Both Canada and Mexico are leading import and export markets for the US. Trucking is by far the dominant surface mode for transporting goods, which means most trade flows through land ports. Only with regard to imports from Canada to the US does the rail mode make up more than one-sixth of the surface borne freight. Water borne and air modes make up a very small portion of the total. Simply put, cross-border trade among all three countries is overwhelmingly dependent on the movement of freight-bearing trucks traversing land ports of entry.

The vast preponderance of cross-border traffic is handled at a small number of ports. Thirteen ports handle 85 percent of cross-border freight flows, which means that the other 93 ports handle just 15 percent of the total flow. Overall, 95 percent of the trade that crosses the two land borders is accommodated by just 20 ports. At the Canada-US border, five of the eight largest crossings are bridges. If cross-border trade vitality is dependent on well-functioning bridges, then the incapacitation of one or more of these bridges is a serious threat to Canada-US trade. The problem is compounded by the relatively long distances that would have to be traveled to cross the border at alternative sites. From a critical economic infrastructure perspective, a relatively small number of ports should be the primary focus of efforts to ensure port infrastructure resiliency.

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² Data and figures are taken from Davidson, David and Austin Rose, "Cross Border Freight Flows at the Two Land Borders." *Border Policy Brief* (Volume 6, No. 1), published by the Border Policy Research Institute, Western Washington University, Winter, 2011, retrievable at <http://www.wvu.edu/bpri/publications/border-policy-briefs-2011.shtml>. All the figures use 2009 data from the North American Transborder Freight Database, maintained by the US Bureau of Transportation Statistics, retrievable at <http://www.bts.gov/programs/international/transborder/>

Paramount Role of Key States in Cross-Border Trade

On the southern border, California and Texas serve as major trip beginning points and endpoints for cross-border trade. Texas is the origin of 82 percent and 86 percent respectively of the exports moving south through El Paso and Hidalgo. California is the origin of 92 percent of exports, and the destination of 86 percent of imports flowing through Otay Mesa. On the northern border, no state plays such a commanding position in sourcing or receiving cross-border trade. However, California and Washington State are highly significant beginning and end points for trade, spanning the west coast corridor and traversing the northern border at Blaine, Washington. Similarly, Michigan, Pennsylvania and New York all are major source and destination states for freight crossing at ports of entry in Detroit, Buffalo and Champlain. Ports of entry are closely linked to the economies of the states in which they are located. For this reason, individual states have a major stake in the efficiency of these ports and state governments, and in coordination with their cross-border neighbors, should take the lead in infrastructure planning and resiliency.

North-South Trade Corridors

A close analysis of freight flows reveals a mid-continent region heavily associated with manufacturing. Integrated manufacturing supply chains extend from Ontario and Quebec, through the Midwest to industrial and manufacturing zones in the Mexican borderlands. Detroit and Laredo serve as “bookends” for this important corridor. Large border states—Michigan, Pennsylvania, New York and Texas account for a very large proportion of exports and imports traversing the northern and southern borders. A similar pattern is found on the west coast where north-south trade flows through key ports in California (Otay Mesa) and Washington (Blaine). All three countries have a strong stake in the maintenance of efficient north-south corridors which are dependent on well-functioning land ports of entry that serve as gateways to them.

Recent Canada-US Border Frameworks

Border frameworks since 2010 have made trade facilitation and protection of critical infrastructure central to the strategic mission of homeland security.³ Specifically, the Beyond the Border Action Plan (BtBAP) and the Northern Border Strategy (NBS) stress themes aimed at enhancing cross-border trade and commerce, and facilitating greater collaboration on public safety and resiliency. One strategic objective in the NBS, released in June 2012, is to “ensure community safety and resiliency before, during, and after incidents, including terrorist attacks and natural disasters (NBS, 13).” The NBS refers to the importance of safe and secure border communities to the nations’ economies, and states that one of the strategic objectives of the Department of Homeland Security (DHS) is to “enhance the ability of communities to recover quickly and resume essential services and economic activity in a timely fashion (NBS, 15).” Part IV of the BtBAP points to the need to “mitigate the impacts of disruptions on communities and the economy by managing traffic in the event of an emergency at affected border crossings (BtBAP, 29).” Since publication of the BtBAP, the DHS and Public Safety Canada have released the guide, *Considerations for United States-Canada Border Traffic Disruption Management (December*

³ DHS’ Quadrennial Homeland Security Report, released in 2010, wove trade and commerce functions with the traditional primary focus on combating terrorism. “we must work with our international partners and with the private sector to prevent the exploitation of the interconnected trading, transportation, and transactional systems that move people and commerce throughout the global economy and across our borders. At the same time, we must also work with those same partners to ensure the security and resilience of those systems in order to expedite and reduce unnecessary encumbrances to lawful trade and trade that may impair economic vitality. DHS. Quadrennial Homeland Security Review Report, February 20, 2010.

2012), that outlines best practices for land border traffic management to support resumption of business activity at the border following an emergency.

These recent border frameworks are also important for how they conceptualize borders. The NBS articulates three different interrelated conceptions of borders—as jurisdictional lines and physical checkpoints; as secure flows; and as shared communities and infrastructure (NBS, 7). The latter two conceptions highlight important commercial and sociological aspects of borders. From this perspective, borders have critical transactional functions as connectors of economies, people, communities and infrastructure. Strategies for securing and managing borders and border environments are guided by federal governments pursuing national security missions, but their efforts must be meshed with the realities of communities, regions and states where shared community, commercial and infrastructure concerns are most manifest.

In particular, given the economic and social importance of border crossings, border traffic flow strategies are key elements in critical border infrastructure planning and resilience. In the BC-Washington region (as in other cross-border regions) there is strong interest in developing disaster commerce resumption/recovery strategies to ensure cargo and other commerce can cross the border during and after an incident.⁴ Such goals are implied in emergency management protocols, but actual operational plans such as dedicated special lanes or systems for quickly prioritizing freight movements have not materialized.

Recent Efforts in the Pacific Northwest

The Pacific Northwest has been a focal point of many initiatives on border security and critical infrastructure planning in recent years, including pilot projects spelled out in the Beyond the Border Action Plan. This region, home of the Enhanced Drivers' License (EDL) and the first trusted traveler program (PACE), is well known as an incubator of border policy innovation. It has a long standing Pacific Northwest Emergency Planning Arrangement (PNEMA) going back to 1998, linking the states of Alaska, Idaho, Oregon, and Washington, and the province of British Columbia and The Yukon. PNEMA's mission is coordination of emergency preparedness, response and recovery through a regional approach. As a proven and effective regional bi-national entity, it is viewed nationally as a model for broader North American mutual aid agreements.

Security planning for the 2010 Olympic and Paralympic Winter Games in Vancouver, British Columbia was another model of successful region-led, bilateral security and infrastructure collaboration, involving more than 40 Canadian and US federal, state and local law enforcement agencies. An Olympics Security Committee, initiated by Washington state officials four years before the event, and funded through state-federal funding partnerships, helped facilitate engagement of federal, state and local officials on both sides of the border.

⁴ A major research report on developing state-level freight resiliency plans conducted by the MIT Center for Transportation and Logistics makes the point that there are important difference between the *response* to an incident and *recovery* during and after the event takes place. The report defined response as "actions taken before, during, or after an incident with the objectives of (1) saving lives, (2) minimizing damage, or (3) enhancing long-term recovery. Recovery, on the other hand, are actions taken after an event to return vital economic systems to minimum standards (in the short term) and all economic systems to normal or improved levels (in the long term)(2008, p. 47). For our purposes, this distinction is important in developing mechanisms to ensure border ports of entry remain as functional as possible during natural or manmade disasters.

A broader effort to plan for critical infrastructure disruptions throughout the region has been led by the Pacific Northwest Economic Region (PNWER) in partnership with several federal agencies. “Blue Cascades” exercises to inform and prepare infrastructure owners, operators and government officials and other stakeholders about recovery issues after a disaster, have been held since 2002. Topics covered include cybersecurity, earthquake recovery, pandemics and supply chain resilience. In 2012, PNWER was contracted by the U.S. Coast Guard to run the Canada-U.S. Maritime Recovery Strategy pilot project that is part of the Beyond the Border Action Plan. The effort resulted in progress toward implementing a multi-agency, multi-jurisdiction communications and information sharing protocol and identification of specific action steps to improve regional maritime resilience. An important expected outcome from this pilot is a maritime recovery annex to the PNEMA, which along with similar agreements in the Great lakes and Atlantic regions could form part of a comprehensive bilateral agreement.

A British Columbia (B.C.)-Washington Border Incident Communications Protocol (BICP) for exchanging information in the event of incidents leading to border closures was created in 2005. The protocol, partnering federal, state/provincial and local transportation and law enforcement agencies, spells out specific notification and other information required by agencies initiating, or affected by, a border shut down. As part of the implementation of the Bitmap, Canada and the U.S. have jointly published a best practices guide—*Considerations for United States-Canada Border Traffic Disruption Management*—to help regional authorities develop plans for specific points of entry and conduct cross-border regional exercises.

Although not cross-border in scope, the Washington Department of Transportation (WDOT) joined with the MIT Center for Transportation and Logistics (2008) to produce a comprehensive report on developing a freight resiliency planning process that can be used by any state. The report drew heavily from the planning experience in Washington State where, for example, a prioritization scheme determines which type of traffic gets preference in the event of road slowdowns or closures.

Summary and Recommendations

The DHS has defined its border security mission to encompass shared border infrastructure assets spanning cross-border communities. This more expansive conception of border security highlights northern and southern border crossings as vital economic and social assets. Protecting and restoring these assets is recognized as an important aspect of border management.

Critical border infrastructure planning should be tailored to varied geographical settings, cultural dynamics, economies, and regional political assets. It goes without saying that the Canada-U.S. (and U.S.-Mexico) borders are really several border regions with different vulnerabilities and political capabilities. Crossings served by bridges have different requirements than ports accommodated by surface roads. Commuters comprise large crossing populations at major southern Port Operation Committees (POEs), but are generally insignificant at most northern crossings. The composition of freight shipments is quite different in the Midwest manufacturing corridor compared with the Pacific west region. Cross-border institutions and stakeholder forums also vary in capabilities and efficacy. All this means that critical infrastructure planning must have a strong regional, cross-border orientation.

The subnational level should drive critical infrastructure planning, but within a context of partnerships involving federal security and public safety entities and private sector stakeholders. State governments in particular are well positioned to exert leadership because of the importance of major POEs to states’

economies, and the states' responsibilities for managing and funding transportation systems, law enforcement and emergency management entities. On the northern border, state-provincial forums and other arrangements have evolved for dealing with regional cross-border transportation and safety problems. These arrangements can be usefully leveraged as has been the case with the national Joint Transportation Executive Committee (JTEC) that is part of the Washington Governor-BC Premier annual meetings.

Neutral forums should be created to facilitate engagement of federal and subnational authorities on both sides of the border. Several models exist. POEs set up by the Beyond the Border declaration in 2011 could be expanded to include transportation and emergency management officials and private sector stakeholders, and tasked to help plan and implement contingency planning. Perhaps the most impressive model for this kind of forum is the International Mobility and Trade Corridor Project (IMTC) in Whatcom County, Washington, which regularly convenes cross-border government, business and border enforcement entities to promote transportation and security improvements for the four border crossings linking Washington State and the Lower Mainland of British Columbia.

Strong relationships need to be in place before an emergency or disruption occurs. Over the years there has been considerable investment by both the U.S. and Canada in building a culture of cross-border collaboration in the Pacific Northwest. Stakeholders in this region know each other and many public-private frameworks exist for building and fostering informal relationships. U.S. security planning for the 2010 Vancouver Olympics was significantly aided by the existence of a rich web of cross-border law enforcement and emergency management connections in place prior to the time the respective federal governments became fully engaged in Olympics' planning. Such relationships are vital for building trust and opening effective communication channels for navigating different administrative systems and overcoming turf issues.

Response and recovery are different. During the response phase of an emergency or disaster, law enforcement and emergency aid personnel are in charge. The mindset is that of apprehension (catch the perpetrators) or abate the damage (put out the fire). The recovery phase shifts the focus to *resuming* economic and other cross-border activity. Companies, transportation personnel and local officials are important for this effort. Effective contingency plans for POEs would integrate these two phases.

Develop and validate (through exercises) a Pacific Northwest framework for resumption of land border commerce at the Cascade border crossings. Like the Maritime Commerce Recovery pilot, a framework for resuming commerce at ports of entry should be developed, attached to the PNEMA and made exportable through existing emergency management protocols to other border regions, north and south.

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