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Tolling the line, part I

How to maximize toll revenue near U.S. international borders

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Public owners face unique and significant challenges when attempting to maximize revenue capture on toll facilities near the Mexican or Canadian border.

In this white paper, three of the most problematic areas:

- Submitting a confident T&R report or a conservative one?
Which is best and why?
- Pros and cons of electronic toll collection versus manual collection.
- Extending enforcement beyond the border – a new frontier.

More near-border toll facilities in the future

Residents of El Paso, Texas, or Ciudad Juárez, Mexico, are all too familiar with traffic congestion. On the U.S. side, near-border highways and interstates can be jammed, creating delays, draining productivity and hampering the flow of goods and services into and out of the country. In fact, El Paso is the fourth busiest truck gateway in the United States, according to the U.S.DOT's Bureau of Transportation Statistics.

The gridlock is due, in part, to the North American Free Trade Agreement, which has increased dramatically cross-border traffic:

- Nearly 93 million personal vehicles entered the United States in 2011, 31.6 million from Canada and 61.2 million from Mexico, according to the BTS.
- In 2011, goods valued at more than \$1.06 trillion crossed the U.S. border in trade with the two countries – 15 percent higher than in 2010 and 44 percent higher than 2009.
- Total trade between U.S., Canada and Mexico increased 12 percent in 2011 from 2010.
- Among all modes, roads had the largest increase in shipment value, \$69 billion, from 2010 to 2011.

The increased trade is clogging ports of entry. In 2011, authorities in Laredo, Texas, the top road gateway with \$117.3 billion in international road shipments, nearly doubled the number of lanes to 15 on the World Trade Bridge. Still, the wait to enter or exit the United States can be as long as six hours.

Lack of traditional funding is driving trend

No question the need for more border crossings and expansion of near-border facilities is there, but the funding to pay for them is not. As cash-strapped state departments of transportation try to keep pace with demand, many are considering tolling as a solution to funding the mobility-enhancing projects their constituents so desperately need.

We can see this trend playing out on both borders:

- In California, the San Diego Association of Governments is considering a new port of entry and four-lane state highway border crossing in Otay Mesa.
- In El Paso, the Texas Department of Transportation is attempting to ease congestion by implementing, in

phases, a 40-mile toll system of managed lanes and new toll lanes along Loop 375 and Interstate 10.

- On the northern border, the cities of Detroit and Windsor, Ontario, are a step closer to building a New International Trade Crossing toll bridge.

Troubleshooting the three biggest challenges public owners will face

HNTB Corporation has assisted with the development and operation of several near-border toll facilities, including:

- The Maine Turnpike
- The Detroit Windsor Tunnel
- The South Bay Expressway (State Route 125) in San Diego
- Border-crossing civil and traffic engineering at the Lake Champlain facilities in upstate New York

From those experiences, we have identified three problematic areas in maximizing toll revenue on a near-border toll project:

1. Preparing a sound traffic and revenue study

Forecasting the socioeconomic trends and fluctuations in transportation patterns and mode choices that will influence demand for a proposed near-border facility are enormously challenging. Public owners have access to U.S. Census Bureau data and other resources to help forecast those characteristics for U.S. motorists, but getting that data is only half of the battle for near-border facilities. Accessing similar information from the neighboring country is much more difficult, if not impossible.

- **Include reasonable assumptions.** The city or metropolitan planning organization will have models, containing information about traffic generated from the neighboring country, as well as future growth and development in the area. Whatever those assumptions are, apply tolling to them and plug them into the T&R report. Owners also should conduct sufficient sensitivity testing of the assumptions to better understand the dynamics of the transportation system over the course of the transportation investment. If defensible and reasonable, these assumptions and sensitivity results will help to raise the confidence levels of rating agencies and investors.
- **Highlight historic trends.** The typical investment-grade traffic and revenue report contains an origin and destination study. But reports for

near-border facilities will need to go into much more detail about the makeup of users and the frequency of their trips. Owners should factor into their reports any historic trends of toll facilities in the same area.

- **Segment the business rules.** The owner will have to provide extensive detail about its revenue capture strategy. For near-border facilities, this strategy is much more influential than for other toll facilities with more “predictable” users. The owner will need to draft strong business rules for each type of user and detail how the agency will communicate and enforce those rules.
- **Seek best practices.** Public owners will need to cite specific steps they will take to mitigate leakage from international users. Because a depth of knowledge does not exist on this topic for U.S. agencies, one best practice is to ask other owners with similar facilities for their policies, procedures, benchmark collection rates and demographic profiles.
- **Estimate conservatively.** A near-border facility cannot approach the financial market with an inflated or unrealistic revenue capture rate. Investors and rating agencies will not have faith in them or the overall soundness of the toll plan. To instill in the financial market the greatest confidence in a proposed facility and its management, owners should be realistic and honest in their reporting of both the assumptions, sensitivities and anticipated results.

2. Determining the best toll collection method.

Brick-and-mortar toll plazas and toll booths are viewed by some as the best collection method for near-border facilities because they act as natural deterrents to violators. However, traditional collection methods may not be practical in every situation. For example, if an owner is adding new capacity to an existing congested highway in a heavily developed urban area, the necessary right of way may not exist to accommodate the wider roads traditional toll plazas require. Or, the cash-strapped public owner may lack the financial resources necessary to pay the additional capital and operational costs of traditional toll plazas. In this situation, the public owner may be willing to trade a sizeable leakage rate for the higher traffic volumes, lower capital outlay, potentially reduced operating costs and increased environmental friendliness of all-electronic tolling.

Would video tolling, as a backup system to all-electronic tolling, help increase the revenue capture rates? It would increase domestic revenue capture, but it will not necessarily increase the capture rate of international customers. Unless the owner has a legal agreement of reciprocity with the neighboring country, video tolling’s usefulness stops at the border. U.S. toll agencies cannot access contact information of foreign nationals nor do they have the authority to enforce payment beyond their states’ borders.

Today, no U.S. toll agency or department of transportation has such an agreement with Mexico or Canada. Such an unprecedented partnership would be classified as an international affair, requiring the involvement of multiple U.S. federal government agencies, local and federal agencies of the neighboring country and a significant investment of time and resources on the owner’s part. In the meantime, owners may want to consider other proactive steps to curb or offset leakage, such as:

- **Launching an extensive communications campaign** in both English and the language of the international target audience. Stress the benefits of using the facility and being a toll tag customer.
- **Making the toll tags easy to purchase and replenish.** Installing toll tag kiosks, either in popular retail chains frequented by international customers or in locations near ports of entry, is a smart option.
- **Permitting anonymous toll tag accounts.** These tags could be purchased and refilled with cash by customers who do not have major credit cards, U.S. debit cards or U.S. bank accounts.
- **Integrating the toll tag with other transportation elements.** Allow customers to use their toll tags to pay for parking at nearby airports, in city parking garages and at stadiums.
- **Giving away toll tags as a promotion.** If a large percentage of the facility’s international users will be frequent customers, this could be an effective strategy to broaden distribution and encourage compliance.
- **Offering shuttle service.** If vehicle ownership is low among residents in the neighboring foreign city, the public owner might consider offering shuttle service on its toll route. The shuttle then

- could link with other modes of transportation, such as buses, streetcars, light-rail, etc., to improve connectivity within the city.
- **Expediting U.S. entry of commercial traffic.** Foster an agreement with U.S. border inspection facility managers to dedicate a lane exclusively for commercial vehicles with toll tags, offering those customers faster entry and exit and greater incentive for compliance. Inspection charges could be combined with toll rates, allowing customers to pay a single fee.
- **Increasing non-toll revenue**, such as:
 - o Selling advertising space on bridges or dynamic message signs.
 - o Offering sponsorships of service plazas, toll holidays, motorist-assist vehicles and park-n-ride lots.
 - o Leasing easements for cell phone towers and fiber optic cable lines, which generate revenue and benefit the facility's operations.
 - o Offering retail sales at the facility, such as food, merchandise, etc.
- **Sharing development costs** with adjacent communities, developers and corporations that will benefit from the toll facility.

3. Enforcing compliance across the border

Identifying international violators and preventing them from accessing the toll facility is a tremendous challenge. Overcoming it will require public owners to think creatively and forge new partnerships with:

- **Local law enforcement.** Owners may want to consider stationing patrol vehicles equipped with license plate readers along the route. These readers can scan hundreds of plates at a time and compare them with a database of repeat violators. The legal actions an officer can take once he or she has stopped a vehicle depends on the facility's business rules and state statutes.
- **The U.S. Customs and Border Protection and the U.S. Immigration and Naturalization Service.** Perhaps these federal agencies could identify violators via their passports and collect outstanding toll violations on the spot before allowing the person to enter or exit the United States?

- **The foreign tolling counterpart or border patrol.** Could these entities identify violators as they cross the border? As incentive, the U.S. public owner might consider offering the participating foreign agencies a percentage of each payment they collect.

It should be noted, however, that such partnerships do not exist and would involve a highly complex, lengthy process, most likely involving both federal governments. Chances are the public owner would need to explore legislation that would allow it to flag repeat violators at the border and deny them entry if payment for past violations is not rendered.

No doubt cross-border traffic is increasing. Tolling can be part of the solution in addressing the need for enhanced mobility as long as public owners understand and prepare for the unique risks they will face.

Additional Resources

For more information about tolling near international borders, consult the following:

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Federal Highway Administration's Border-wide assessment of Intelligent Transportation System, Technology - current and future concepts, chapter 3

<http://ops.fhwa.dot.gov/publications/fhwahop12015/ch3.htm>

International Bridge, Tunnel and Turnpike Association

www.ibtta.org

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