



***BorderWizard*<sup>™</sup> Analysis  
Technical Review Summary**



***BorderWizard*<sup>™</sup> Simulation Study**

**Cargo Pre-Inspection Evaluation Analysis for  
Peace Bridge Port of Entry Facilities  
in Buffalo, NY**

Prepared for

U.S. Customs and Border Protection

By

Regal Decision Systems, Inc.  
8015 Corporate Drive, Suite K  
Nottingham, MD 21236  
443-577-4222

[www.regaldecision.com](http://www.regaldecision.com)



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**Station Name: Peace Bridge Cargo Pre-Inspection**

## **PROJECT SUMMARY**

Date Report Generated: 03/03/2015    Performed by: Mike Dowling  
*BorderWizard*<sup>TM</sup> Version: 7.0    Regal Decision Systems Inc.

### **BACKGROUND**

On February 4, 2011, United States President Barack Obama and Canadian Prime Minister Stephen Harper announced the *Beyond the Border Declaration*, which was intended to be a joint effort to improve the security and economic prosperity of the two countries. The *Beyond the Border Action Plan*, released in December 2011, defined the specific tasks necessary to carry out this land, sea, and air border screening initiative. One such proposed program was a Cargo Pre-Inspection process through which commercial entries at a land port of entry (LPOE) can be pre-screened on the Canadian side of the border prior to arriving at the U.S. inspection plaza. The ultimate intention of this objective is to reduce commercial wait times and port congestion while maintaining the security requirements necessary at an international border.

The initial stage of implementing this pre-inspection program was to conduct a Cargo Pre-Inspection Pilot designed to evaluate the efficacy of this concept by collecting sample data and evaluating the potential impacts on the border wait times. The pilot program was implemented in a two-phase approach. Phase 1 was launched in June 2013 at the Pacific Highway LPOE in Blaine, WA. This initial phase was designed as a “proof of concept” approach in which only commercial entries enrolled in the Free and Secure Trade (FAST) program were eligible to participate. The operational component of Phase II of the pilot program began February 18, 2014 at the Peace Bridge LPOE in Buffalo, NY and concluded on January 20, 2015. Phase II was expanded to include all cargo traffic, with the exception of commercial entries that owe a user fee which must be collected at the U.S. plaza. In support of the Cargo Pre-Inspection Pilot, U.S. Customs and Border Protection (CBP) requested that Regal Decision Systems (REGAL) evaluate the pilot program to determine the true efficiencies gained and forecast the potential benefits if the pre-inspection were to be fully implemented.

### **OBJECTIVE**

The ultimate objective of the Cargo Pre-Inspection evaluation is to determine the impact of expanding the pilot program into full pre-inspection implementation. Such an undertaking would require considerable costs and it is necessary to evaluate whether the benefits of the pre-inspection process justify the expense when compared to less costly alternatives. The initial phase of the analysis involved multiple site visits to the existing inspection plaza to collect processing data at both the pre-inspection and U.S. plazas. This data was then evaluated along with previously collected 2013 data to determine the efficiencies gained with the pre-inspection pilot. A *BorderWizard*<sup>TM</sup> simulation was developed to reflect the full implementation of the pre-inspection program based on the data evaluation. This simulation model was studied to identify the impacts on the cargo wait times and port congestion to determine the benefits of full pre-inspection implementation.

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## CARGO PRE-INSPECTION PILOT

### SITE LAYOUT

Figure 1 illustrates the CBP processing areas at the Peace Bridge LPOE during the Cargo Pre-Inspection Pilot. Trucks approached the cargo pre-inspection plaza from the west along Queen Elizabeth Way (QEW). The pre-inspection pilot was not mandatory and was only operational from 8:00 – 16:00 Monday thru Thursday so trucks bypassing the area would continue along the QEW to the bridge. Trucks being processed at the pre-inspection turned right after passing the Central Avenue overpass and proceeded through a portable Radiation Portal Monitor (RPM) scanning unit. The trucks then continued to the two-lane pre-inspection booth canopy for pre-inspection, which was intended to mirror the commercial primary processing in the U.S. plaza. After clearing the primary inspection at the pre-inspection lanes, any trucks that were deemed high risk, such as an RPM alarm or an Armed and Dangerous lookout notification were required to stop for adjudication processing in Canada before rejoining the bridge traffic towards the U.S. Approaching the existing U.S. inspection plaza, trucks remain in the right lane as they cross the bridge. Commercial primary processing is conducted in the west-most primary booths. Up to seven lanes are available for commercial traffic, but several of the lanes are equipped with bi-level booths that can be assigned to passenger vehicle traffic. During the pilot, all trucks that underwent primary processing through the pre-inspection facility were directed to Lane 2, at which point they were cleared to exit the compound or directed into secondary for further inspection. Any trucks that bypassed the pre-inspection plaza or needed to pay a user fee were directed to any of the other available commercial lanes. Commercial entries requiring secondary processing may be directed to the Vehicle and Cargo Inspection System (VACIS), the adjacent parking area for in-office processing, or the dock parking.

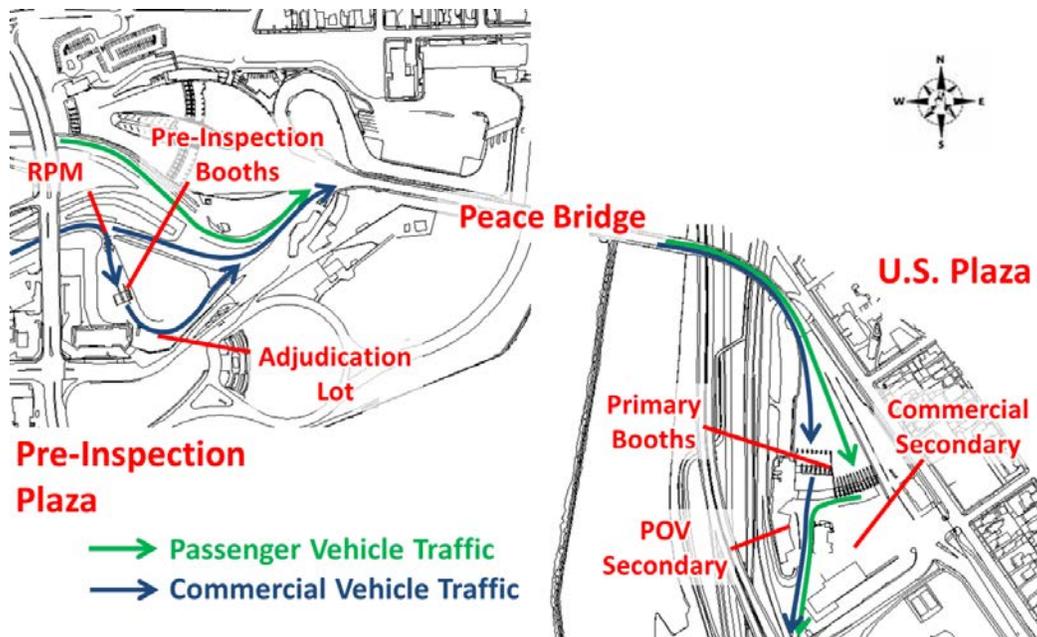


Figure 1 – Peace Bridge CBP Inspection Facility with Cargo Pre-Inspection Pilot

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## DATA COLLECTION SITE VISITS

This cargo pre-inspection evaluation has been completed using data samples from a total of three separate data collection site visits to the U.S. CBP inspection facilities at Peace Bridge. The initial REGAL site survey was conducted on December 11 and 12, 2013 to develop a baseline *BorderWizard*<sup>TM</sup> model of the existing U.S. plaza prior to the opening of the cargo pre-inspection pilot program. That baseline was then adjusted based on CBP-provided August 2013 data to reflect the peak season port operations. This peak season baseline will provide much of the simulation input data for the U.S. plaza and serve as the basis for comparison to the final full pre-inspection implementation scenario. The U.S. plaza simulation input data elements were collected for all modes of travel (passenger, cargo, and bus), and the main components include:

- Process Times – the amount of time required to complete an individual inspection process, such as a primary inspection or a VACIS scan
- Referral Rates – the percentage of traffic referred for additional processing at one of the secondary inspection areas
- Vehicle Arrivals – a full week of hourly vehicle arrivals at the port
- Lane Schedules – a full week of hourly primary lanes schedules

REGAL visited the Peace Bridge LPOE the second time on July 23 and 24, 2014 in order to gather the necessary data to incorporate the pre-inspection pilot into the simulation model. The site survey included data collection at the pre-inspection area on the Canadian side of the Peace Bridge as well as a data refresh on the U.S. side to determine any changes to the processing in the U.S. plaza. The specific focuses of the second site visit included:

- Cargo Pre-Inspection – the processing time and traffic profile at the cargo pre-inspection booths for comparison to the previously-collected primary processing data
- RPM Adjudication – the referral rate and processing time in the RPM Adjudication area
- Commercial Primary – the processing time at the commercial primary inspection booths for comparison to the processing data prior to the pre-inspection pilot implementation
- Release Booth – the processing time and general operations of the Lane 2 release booth

The final data collection site visit was conducted on September 23 and 24, 2014, focusing on the detailed components of the primary inspection process at the pre-inspection booths on the Canadian side and the primary inspection in the U.S. plaza. The primary inspection components included:

- Cargo manifest population – amount of time required to view the shipment manifest, whether automatically through the Automated Commercial Environment (ACE) system or manually entered by the inspecting officer
- Officer interview and manifest review – amount of time for inspecting officer to conduct interview of the driver and review the shipment manifest
- Cash collection – amount of time required to collect user fees from trucks without transponders
- Secondary referrals – amount of additional time spent at primary when trucks are referred for secondary processing

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## DATA COLLECTION SUMMARY

The following section provides summary tables of the collected operational data from each of the site visits. *BorderWizard™* incorporates the observed processing data into the simulation through empirical distributions developed from the observed data set to reflect the randomness and operational variability at LPOEs. However, for the purpose of discussion within this report, the data is being presented as an overall average for each vehicle category and inspection type. The processing data was collected in various ways depending on the particular focus and objective of the site survey.

### December 2013 Site Survey

The December 2013 data set includes all modes of cross-border traffic: privately owned vehicles (POV), buses, and commercial vehicles. As indicated in *Table 1*, the information was collected based on POV citizenship, commercial entry type, and the nature of the inspection in the secondary areas.

Observed Processing Data Summary					
Inspection Process	Vehicle/Inspection Type	Percent of Total	Observed Average Processing Time		Diversion Percentage
			Pull Up Time	Inspection Time	
POV Primary	U.S. Citizens	33.6%	16.0 seconds	42.6 seconds	
	Canadian Citizens	44.3%		53.1 seconds	
	Other	4.5%		80.8 seconds	
	NEXUS	16.8%		16.0 seconds	
	Ready Lane	0.8%		25.4 seconds	
POV Secondary					
POV Secondary Garage					
Bus Primary	Shuttle	28.5%	23.5 seconds	157.2 seconds	
	Full-Sized	71.5%		98.1 seconds	
Bus Offload	Full-Sized	100%		8.9 minutes	
Bus Reload	Full-Sized	100%		23.0 minutes	
Commercial Primary	Empty-no E-Manifest	19.5%	31.0 seconds	139.0 seconds	
	Empty-with E-Manifest	2.0%		96.1 seconds	
	Loaded-with E-Manifest	68.1%		112.3 seconds	
	Loaded-without E-Manifest	2.0%		181.5 seconds	
	Loaded-incorrect E-Manifest	0.1%		306.0 seconds	
	FAST Qualified	5.3%		61.7 seconds	
	Personal Vehicles	3.0%	24.0 seconds	163.4 seconds	
Commercial VACIS	Standard Inspection	80.0%	27.0 seconds	1.5 minutes	
	RPM Adjudication	20.0%	27.0 seconds	12.7 minutes	
Commercial Docks	All	100%		32.8 minutes	
Commercial Secondary Parking	Customs	18.1%		36.5 minutes	
	Documents	12.0%		32.6 minutes	
	FDA	53.0%		10.4 minutes	
	Agriculture	16.9%		20.3 minutes	

**Table 1 – December 2013 Site Survey Processing Data Summary**

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## July 2014 Site Survey

The July 2014 site visit focused solely on commercial traffic, with particular concentration on the pre-inspection pilot that was not operational in December 2013. All traffic surveys were conducted in the pre-inspection booths and therefore the commercial primary is only available as an overall total regardless of the entry type. As denoted in *Table 2*, the pre-inspection data is broken down by the general entry type and whether the trucks were directed to the release booth or require further processing at the general commercial primary lanes.

<b>Observed Processing Data Summary</b>				
Inspection Process	Destination/Vehicle Type	Percent of Total	Observed Average Processing Time	
			Pull Up Time	Inspection Time
Pre-Inspection	Release Booth/Empty	15.1%	25.0 seconds	84.6 seconds
	Release Booth/Laden	72.8%		70.1 seconds
	Release Booth/FAST	3.4%		70.2 seconds
	General Lane/Cash	6.5%		58.6 seconds
	General Lane/Other	2.2%		135.1 seconds
RPM Adjudication	All		12 minutes	
			Pull Up Time	Inspection Time
Release Booth (Lane 2)	Rolling Pass Through		31.0 seconds	0.0 seconds
	Stopped for Processing			60.7 seconds
Commercial Primary (US Plaza)	All		31.0 seconds	141.6 seconds

**Table 2 – July 2014 Site Survey Processing Data Summary**

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## September 2014 Site Survey

While reviewing the July 2014 site visit data, it was discovered that the pre-inspection process is significantly faster than the commercial primary processing in the U.S. plaza. The focus of the September 2014 site survey was to divide the primary inspection into sub-processes for a more detailed comparison to determine the cause of the variance. The entire process, detailed in *Table 3*, has been apportioned into the following categories:

- **Vehicle Pull Up** – This is the vehicle movement time from when the preceding truck leaves the primary lane until the new truck reaches the booth.
- **Manifest Population** – This is the time required to load the truck’s manifest and driver information onto the computer terminal for the officer to review. This occurs automatically if an E-manifest has been submitted prior to arrival. Otherwise, the officer must enter the information manually.
- **Interview and Manifest Review** – The primary officer examines the information and interviews the driver to determine whether a secondary referral is required.
- **User Fee** – Trucks that don’t have a pre-paid transponder on their vehicle are required to pay a \$10.75 user fee. This was not applicable at the pre-inspection plaza as there was no cash collection in Canada and those trucks were directed to a general primary lane in the U.S. plaza.
- **Referral Time** – When a vehicle is referred for secondary processing from the commercial primary, there is often additional time required to provide direction or to hold the truck in the primary lane if the VACIS is occupied. For security purposes, trucks at the pre-inspection were not informed of their referral status, but additional time was observed explaining the new release lane process.
- **Additional Time** – All trucks require some additional time to obtain proper identification, gather paperwork, return these items following the inspection, etc.

<b>Observed Processing Data Summary</b>					
<b>Primary Inspection Sub-process</b>	<b>Transaction Mode</b>	<b>Pre-Inspection</b>		<b>Commercial Primary (US Plaza)</b>	
		<b>Percent of Total</b>	<b>Process Time</b>	<b>Percent of Total</b>	<b>Process Time</b>
Vehicle Pull Up		100.0%	25.5 seconds	100.0%	32.9 seconds
Manifest Population	Automatic (E-manifest)	83.8%	2.7 seconds	79.8%	3.4 seconds
	Manual Entry	10.5%	78.3 seconds	17.9%	77.3 seconds
	Manual with FAST Card	5.8%	43.9 seconds	2.3%	52.8 seconds
Interview and Manifest Review		100.0%	34.5 seconds	100.0%	59.0 seconds
User Fee	Cash Collection	N/A		7.1%	87.6 seconds
	Credit Card Payment			2.9%	89.6 seconds
Referral Time		2.6%	23.6 seconds		183.1 seconds
Additional Time		100.0%	17.5 seconds	100.0%	27.3 seconds
<b>FULL AVERAGE CYCLE TIME</b>		<b>86.1 seconds</b>		<b>142.2 seconds</b>	

**Table 3 – September 2014 Site Survey Processing Data Summary**

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## PRE-INSPECTION SIMULATION ANALYSIS

### DATA EVALUATION

The initial phase of developing the *BorderWizard*<sup>TM</sup> simulation of the cargo pre-inspection and U.S. plaza was to evaluate the collected data and determine which areas were acceptable for use and which data elements did not correspond to the full implementation scenario. As noted above, the peak season August 2013 *BorderWizard*<sup>TM</sup> baseline includes passenger vehicle and bus traffic as well as the commercial processing. That remained the case when developing the scenario simulations to incorporate the traffic interactions, however because the cargo pre-inspection had no direct impact on passenger inspection procedures, all non-cargo processing data has been omitted from this discussion. The most crucial element of the analysis was determining the processing time profile for the fully implemented pre-inspection process.

The pre-inspection was designed to reflect the commercial primary processing that currently occurs in the U.S. plaza. However, as indicated in *Tables 1, 2, and 3* (p. 6-8), there is a significant disparity between the current primary processing and the inspection that was being conducted at the pre-inspection pilot. The observed commercial primary cycle time from the latest data collection site visit was 142.2 seconds, which is 65% higher than the 86.1 second cycle time at the pre-inspection. The following sections discuss the various causes for this discrepancy and decipher which factors are relevant to the full implementation scenario.

### Vehicle Pull Up

The pre-inspection pilot was configured with a mobile RPM unit at the start of the entry plaza allowing space for the trucks to queue directly behind the preceding truck at the booth. The commercial primary lanes in the U.S. plaza are equipped with individual RPM units that define the stop point for queued vehicles. These RPM units affect the truck behavior in that the truck will wait longer once the booth is clear before proceeding and they will travel at a slower pace towards the booth. These factors result in the increased vehicle pull up time evident in *Table 3* (p. 8). For the purpose of the simulation analysis, the originally collected 31-second pull up time was incorporated into the model because the full pre-inspection plaza would be configured with individual RPM units similar to the current layout of the U.S. plaza.

### Manifest Population

The inspecting primary officer can begin the primary process once the shipment manifest is loaded onto the computer terminal. Typically, this occurs automatically if the entry has a corresponding E-manifest in the system. As indicated in *Table 3* (p. 8), there was little difference in the system response times between the pre-inspection pilot and the commercial primary. However, there was a higher occurrence of manual entry on the U.S. side contributing to the longer overall processing time. The reason for this is most likely that the traffic opting to use the

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pre-inspection was composed of a higher number of regular crossers familiar with the system and prepared for entry. In addition, the benefit of drivers using a FAST card was not as evident at the U.S. plaza. When a manual entry is required, the officer has the ability to scan the FAST card to import the driver information rather than having to manually enter it. However, many of the FAST card readers in the U.S. primary lanes were inoperable or malfunctioned frequently. For the simulation input data set, it was assumed that the U.S. plaza data reflects the more accurate depiction of the traffic composition. However, the data will also reflect the FAST card usage for manual entries observed at the pre-inspection, assuming that the newly constructed pre-inspection lanes would include updated FAST card readers.

## **Interview and Manifest Review**

One of the largest distinctions between the pre-inspection processing and the U.S. plaza primary inspection was observed with the officers conducting the interview process. As listed in *Table 3* (p. 8), the pre-inspection officers conducted the interview and manifest review in just over 30 seconds on average. That phase of the primary process took nearly twice as long at the U.S. plaza. There are many factors contributing to this wide variance in processing time. As previously mentioned, the pre-inspection pilot was more heavily utilized by frequent and prepared crossers. This means a higher number of FAST eligible loads, increased officer familiarity with the driver, shipper, and commodity, and fewer of the typical issues occurring at the U.S. plaza such as data entry errors in the manifest or invalid driver documentation. Additionally, the pre-inspection pilot was assigned a permanent, veteran staff while many of the officers in the U.S. plaza had less experience and may not have worked in this area on a regular or reoccurring basis. For the simulation data entry, all of the data sets were combined in order to reflect both ends of the spectrum and everything in between.

## **User Fee**

Approximately 90% of the trucks crossing the Peace Bridge have a transponder decal linked to an automated payment system to handle the required user fee to cross the border. The remaining 10% must pay the fee at the primary booth. As indicated in *Table 3* (p. 8), this additional action adds nearly 90 seconds to the overall primary process. That impact was not experienced in the pre-inspection pilot however, as cash collection was not set up on the Canadian side of the border. In fact, the data shows the opposite effect in *Table 2* (p. 7), as the trucks referred to the general lanes for cash collection purposes had faster inspection times at pre-inspection than any other category of truck. This is because the moment the pre-inspection officer became aware that a user fee payment is required, they stopped the process and directed the truck to proceed to the general commercial primary lanes in the U.S. plaza to restart the primary process. For analysis purposes, the assumption was that cash collection will still be required and will be permitted on the Canadian side of the bridge with the full implementation of the pre-inspection program. Therefore, the cash collection data from the U.S. plaza site survey was included in the pre-inspection process.

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## Referral Time

When an entry is not cleared to exit the port from the primary inspection, the truck often remains at the primary booth for additional time for one of two reasons. Some drivers may require further instruction on how to proceed, which on average adds less than one minute to the overall process. The other situation is that the truck may be forced to wait in the primary lane for the VACIS to become available due to limited queuing space at the VACIS inspection area. This is the more impactful situation as the added time is over two minutes on average and some trucks were observed remaining in the primary lane for 10 – 12 minutes. This additional time will not impact the full implementation of pre-inspection on the Canadian side of the Peace Bridge however, as the trucks will not be informed of their referral status and there will be no need to hold VACIS referrals from crossing the bridge. Therefore, these factors were eliminated from the processing time data in the pre-inspection simulation study. The only additional time that was accounted for is the time required for the officers to explain the release booth process to the small number of infrequent crossers as observed during the September 2014 site visit. It should be noted that the additional time for VACIS referrals was not eliminated from the port operations altogether, but was transferred to the release booths as discussed under **Release Booth** (p. 12).

## Additional Time

Every truck observed at the primary lanes during the September site visit remained at the booth for some additional time to prepare the documents for the officer, collect the documents after the interview was completed, or complete other personal tasks. As indicated in *Table 3* (p. 8), this additional time was approximately ten seconds longer per truck on average at the U.S. plaza than was observed at the pre-inspection pilot. This is further evidence that the traffic being processed through pre-inspection was composed of more frequent crossers well prepared with the proper documentation. The two data sets were combined for this factor of the process in the simulation to represent all levels of drivers.

## Officer Change Over

Another aspect of the primary operations that was evaluated for impact on the truck processing was the shift change when a new officer arrived to relieve the current primary officer of their post. [REDACTED]

[REDACTED] The change over time data was initially recorded during the July site visit based on the amount of time that elapsed between the new officer arriving at the booth and the relieved officer departing. It was discovered that the time was significantly longer in the U.S. plaza, averaging over 3.5 minutes, than it was at the pre-inspection, which took less than 90 seconds on average. This was evaluated in further detail during the September survey. Every time a shift change occurred, the new officer logged into the system, which took between one and two minutes. The reason for the longer change over in the U.S. plaza was that the relieved officer also had to count the cash collection drawer and prepare a deposit envelope, a procedure that took an average of three additional minutes. However, it was observed that this additional time did not impede the truck processing as the relieved officer would settle the cash drawer while the newly arriving officer was logging in and beginning to process trucks.

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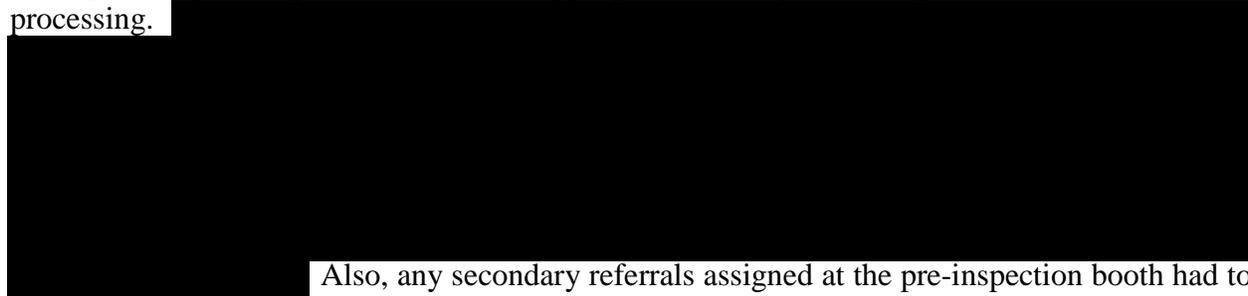


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## **Release Booth**

During the pilot program, there was a single release booth in the U.S. commercial primary plaza to complete the primary processing for any trucks that went through the pre-inspection. These trucks approached the booth in Lane 2 on the U.S. side of the bridge, watching the indicator light for a green signal to proceed without stopping or a red signal to stop at the booth for further processing.



Also, any secondary referrals assigned at the pre-inspection booth had to stop at the release booth to be informed of their referral destination. These routine release booth stops encompassed the majority of the Lane 2 activity, as approximately 88% of the Lane 2 truck stops were less than two minutes in duration. The remaining 12% of the truck stops [redacted] were held at the release booth waiting for the VACIS. Although Lane 2 received priority scanning in order to clear the lane, there were still instances when the trucks were forced to wait at the release booth for as long as 5 – 10 minutes, creating a pre-primary delay. On occasion during the site visit, the Lane 2 queue was observed backing to the bridge blocking access to the general commercial primary lanes. Although there is a possibility that the number of release lane stops could increase when all traffic is processed through the fully implemented pre-inspection, the simulation was developed using the release booth data detailed in *Table 2* (p. 7) as observed during the data collection site visit.

## **Secondary Processing**

The July and September data collection efforts verified that the pre-inspection pilot had no impact on the secondary referral rates and processing times. As such, the assumption is that the full implementation will reflect the commercial secondary processing detailed in *Table 1* (p. 6) as observed during the December 2013 site survey.

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## PRE-INSPECTION AND RELEASE BOOTH PROCESSING DATA

The fully-implemented pre-inspection processing time profile distribution used by the simulation model was developed to incorporate all of the factors described above. *Table 4* provides the overall average processing time for commercial trucks when all of these aspects are accounted for. All secondary processing information reflected the operational data listed in *Table 1* (p. 6)

<b>Full Implementation Simulation Data Input</b>				
Inspection Process	Vehicle Category	Percent of Total	Average Processing Time	
			Pull Up Time	Inspection Time
Pre-Inspection	All Trucks	100.0%	31.0 seconds	94.2 seconds
			Pull Up Time	Inspection Time
Release Booth (Lane 2)	Rolling Stop		31.0 seconds	0.0 seconds
	Stopped for Processing			60.7 seconds

**Table 4 – Simulation Data Input Summary**

## ADDITIONAL SIMULATION ASSUMPTIONS

In addition to the processing data detailed above, there were various other data input assumptions used in the simulation modeling exercise. These assumptions are as follows:

- As the full implementation project is still in the evaluation and planning stages, the proposed pre-inspection capacity has not formally been determined. The simulations were executed with pre-inspection canopy capacities of eight, ten, and twelve lanes.
- The full implementation of the pre-inspection program will eliminate the need to restrict commercial primary lane scheduling in order to accommodate peak POV traffic. Therefore, the simulations did not reflect the commercial primary lane schedule from the baseline model. As requested by CBP, the full pre-inspection capacity was open in the simulation Sunday thru Friday, 7:00 to 23:00 and three pre-inspection lanes were open the remainder of the week. All other staffing and lane scheduling throughout the U.S. plaza reflected the existing peak season baseline simulation.
- All simulations were run for a full week using the August 2013 peak season traffic volumes. This did not account for any potential future increases or decreases in border crosser traffic or possible changes to the traffic profile as a result of the pre-inspection implementation. However, this allows for a direct comparison between the baseline and pre-inspection simulations.
- All simulations were run 10 times with varied random number seeds and the results were averaged to eliminate random anomalies and produce a normalized outcome for each scenario.

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# BorderWizard™ Analysis Technical Review Summary



## PEAK SEASON BASELINE SIMULATION WAIT TIME OUTPUT

With the data input assumptions defined, the existing conditions baseline simulation was run to establish the base level wait times for comparison purposes to the full implementation pre-inspection scenarios. *Figure 2* illustrates the wait time profile over the full week simulation based on the August 2013 vehicle arrivals and lane scheduling. The wait times typically reached their peaks weekday afternoons with maximum values exceeding one hour.

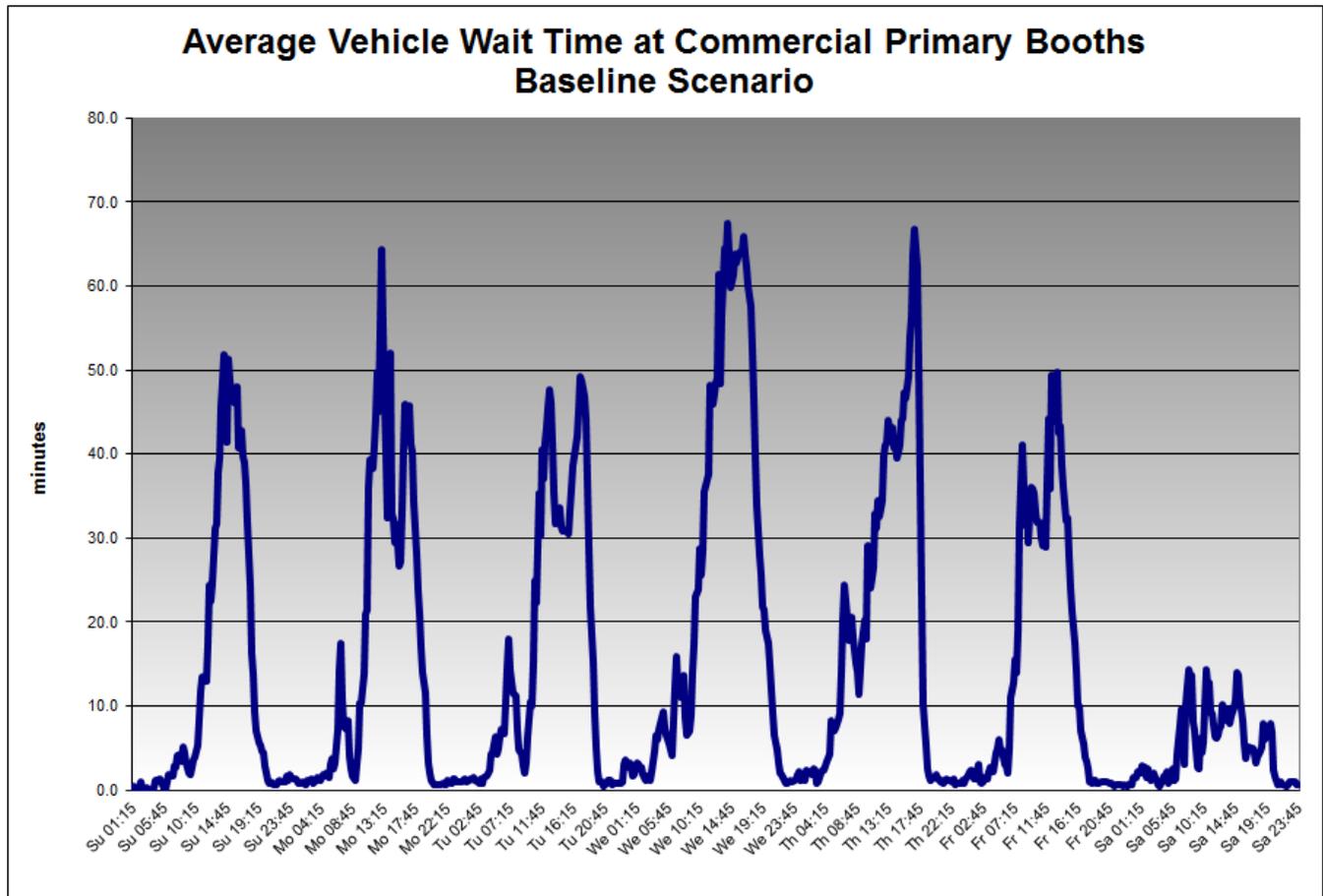


Figure 2 – Baseline Commercial Primary Wait Time Output

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## RELEASE LANE CAPACITY DETERMINATION

Prior to evaluating the pre-inspection plaza and determining the impact on commercial waiting time, it was necessary to define the number of release booths necessary to process the cargo traffic while maintaining an acceptable queuing level. Inadequate capacity at the release lanes could create a significant queue backing across the bridge into the pre-inspection plaza, adversely impacting the processing capabilities there. The simulations were run without including passenger vehicle traffic in order to focus on the release lane capacity requirements based solely on traffic throughput without the influence of external factors. These were evaluated iteratively while increasing the number of release booths available and the resulting queue size outputs can be seen in *Figure 3*. The plateaus in the one-lane data set (blue) are a result of the release booth queue backing into the pre-inspection lanes, indicating that a queue of approximately 75 trucks will begin to impact the pre-inspection operations. This situation also occurred in the two-lane scenario (red), albeit less frequently. The analysis indicated three release booths are necessary to accommodate the commercial traffic based on the previously defined operational assumptions.

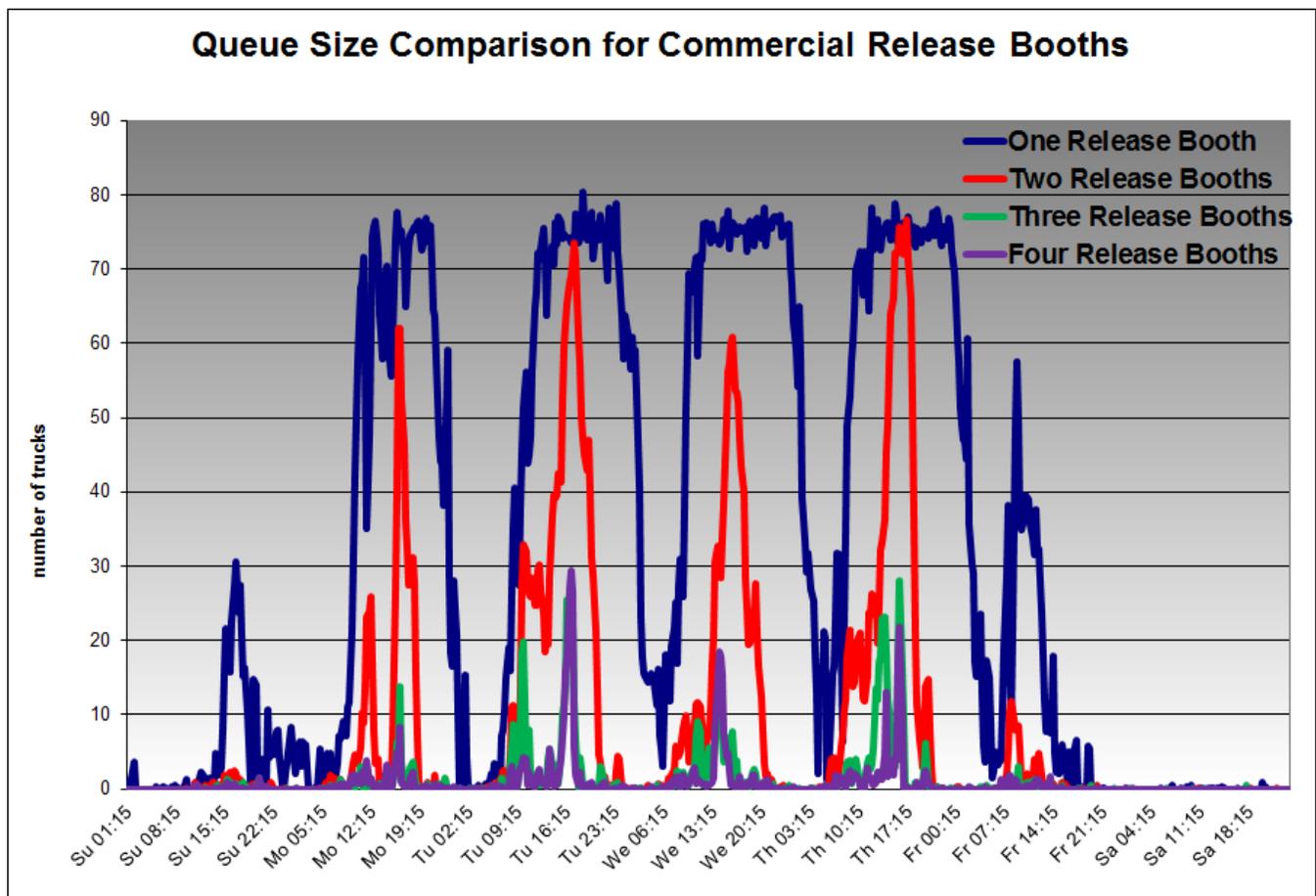


Figure 3 – Release Booth Capacity Sizing Analysis Results

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## PRE-INSPECTION SENSITIVITY ANALYSIS WAIT TIME OUTPUTS

The simulations were then run with three release booths during the high-demand hours of operation when the full pre-inspection capacity was open and one release booth available during the off-peak traffic periods. *Figure 4* provides the wait time outputs for the sensitivity runs with eight, ten, and twelve pre-inspection lanes. As one would expect, the eight-lane scenario yielded the largest maximum queue peaking just above 12 minutes. There were wait time spikes in each of the other scenarios as well, however no waits exceeded 10 minutes and no significant queues developed with the extent of the queue remaining within the pre-inspection approach plaza. The maximum commercial queue at the pre-inspection lanes did not extend beyond the Duty Free on the QEW in any of the scenarios evaluated.

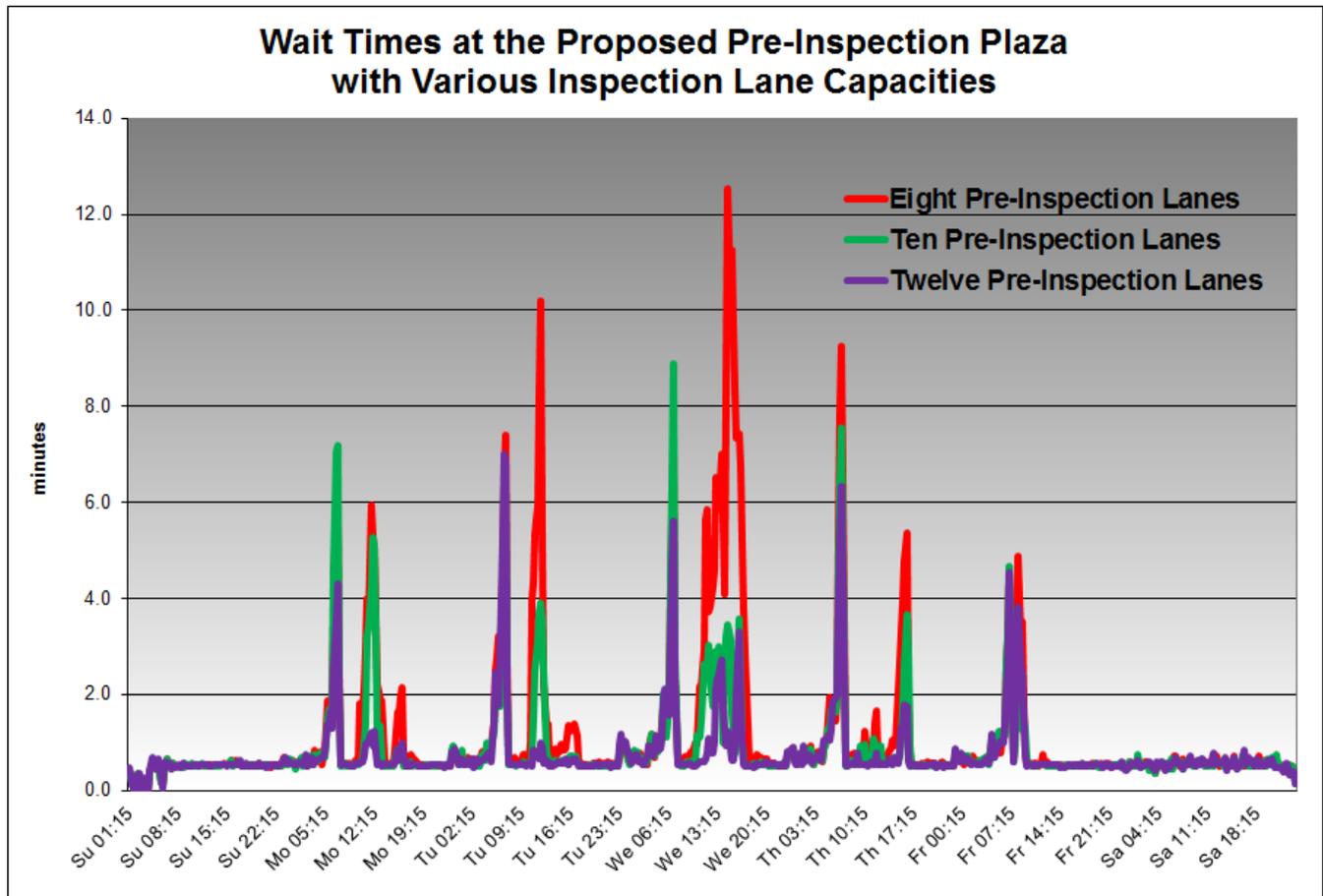


Figure 4 – Pre-Inspection Simulation Wait Time Outputs

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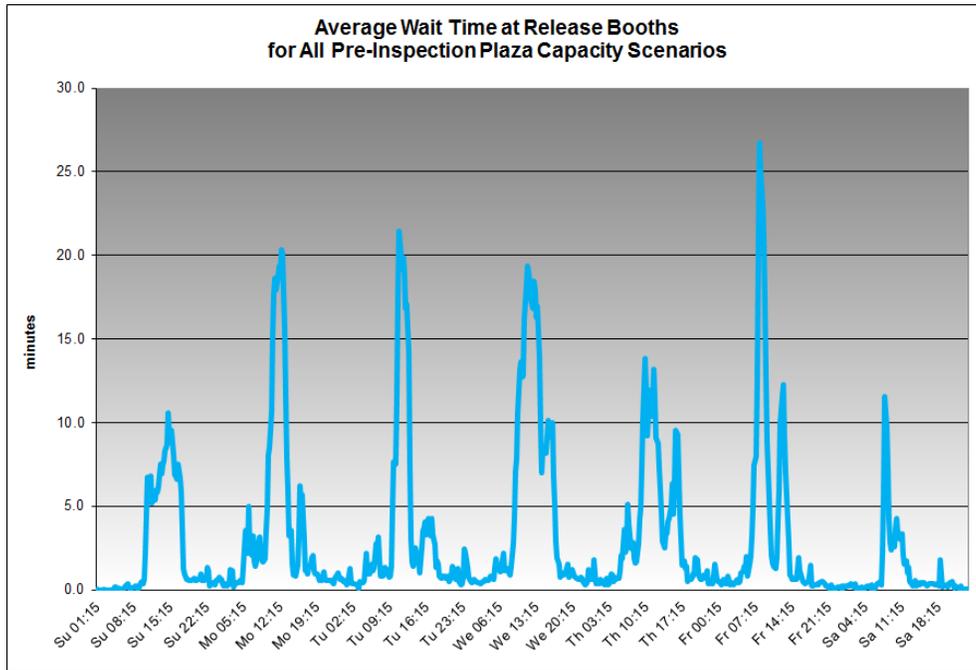
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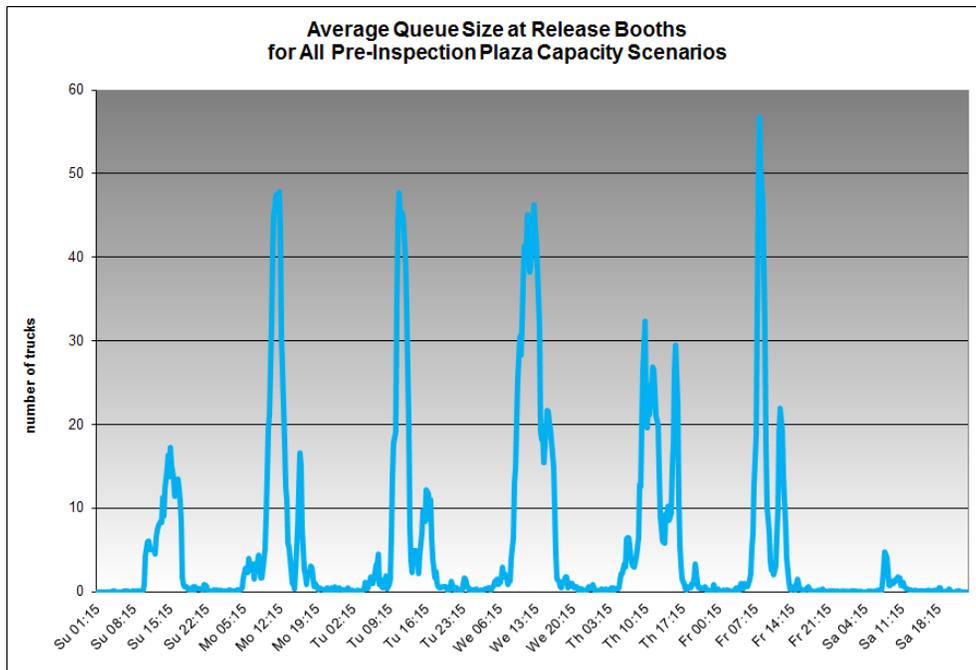
# BorderWizard™ Analysis Technical Review Summary



With minimal queuing at the pre-inspection plaza, the varying number of lanes had no impact on the capacity requirements or wait times at the release booths in the U.S. plaza. *Figures 5 and 6* depict the average commercial vehicle wait time and queue size profiles over the full week simulation, which were consistent between the multiple sensitivity runs.



**Figure 5 – Release Booth Wait Time Outputs**



**Figure 6 – Release Booth Queue Size Outputs**

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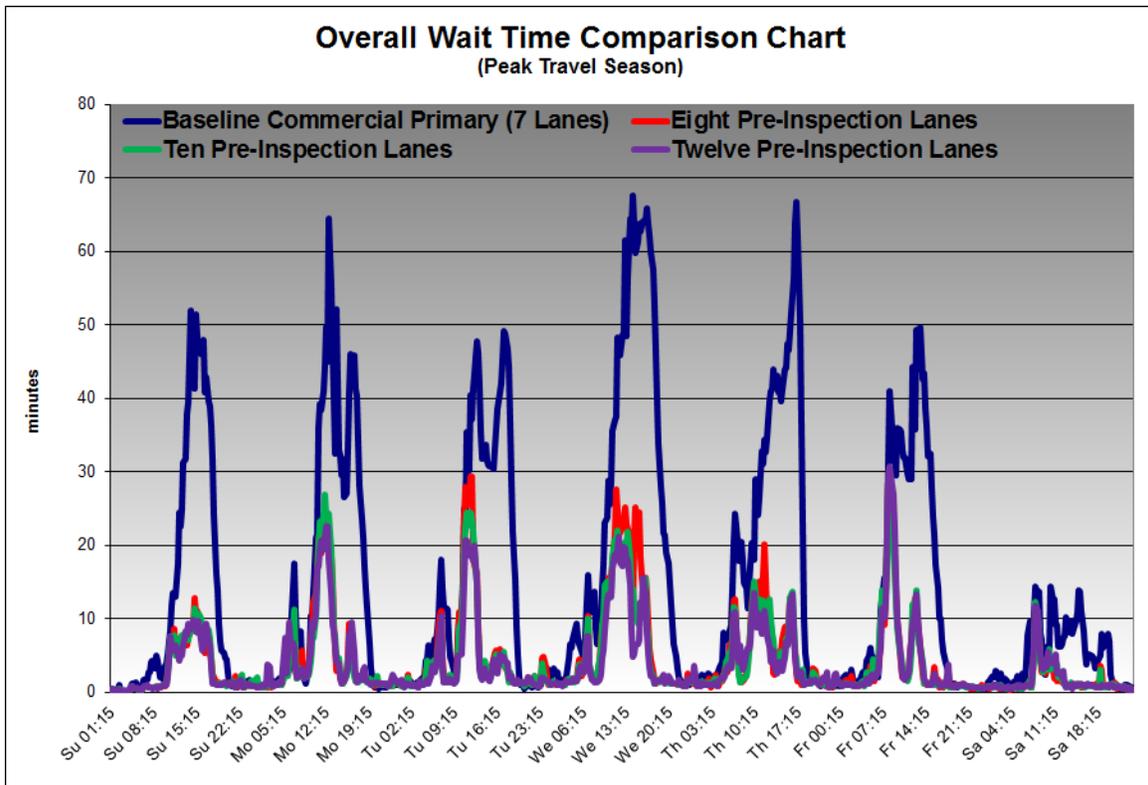


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## SIMULATION WAIT TIME OUTPUT COMPARISONS

With the full implementation of the pre-inspection program, the current U.S. plaza primary inspection operations would be replaced by the two-step process including the pre-inspection on the Canadian side of the bridge and the release booth clearance in the U.S. Therefore, in order to directly compare the proposed full implementation pre-inspection simulation wait time outputs to the baseline primary waits, each pre-inspection and release booth wait time must be combined into a single data point. *Figure 7* presents the combined data sets for each of the pre-inspection lane capacity scenarios over the full week simulations as they compare to the existing condition baseline wait times. *Table 5* provides the total overall averages during the high-demand commercial hours (Sunday 10:00-22:00 and Monday-Friday 5:00-23:00) for each of the scenarios and the overall average wait time savings during those times.



**Figure 7 – Commercial Wait Time Comparison Chart**

<b>Total Average Wait Time Comparisons During High-Demand Hours of Operation</b>	
Scenario	Overall Average Wait Time for Week Simulation
Baseline Commercial Primary (7 lanes)	22.3 minutes
Eight Pre-Inspection Lanes	6.3 minutes
Ten Pre-Inspection Lanes	5.8 minutes
Twelve Pre-Inspection Lanes	5.4 minutes

**Table 5 – Overall Commercial Wait Time Comparison**

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## AREAS OF CONCERN AND RECOMMENDATIONS

Through the analysis process, the simulations have revealed several areas of concern that influence the cargo operations and impact the vehicle wait times. Some of the issues are already being addressed through various means. The following sections briefly describe these concerns and either explain the steps being taken to rectify them or may offer possible alternative recommendations.

### Passenger Vehicle Queuing

As observed during the data collection site visits, POV queuing at the primary booths frequently extends back onto the Peace Bridge during the high-demand periods. When passenger vehicles cross the bridge in the far right commercial lane, which is a common occurrence, this POV primary queuing can cause an obstruction at the end of the bridge, blocking truck access to the commercial primary plaza. This behavior was reflected in the baseline simulation and also occurred in the pre-inspection scenario runs, as illustrated in *Figure 8*. The impact of this hindrance is also evident in the statistical output from the simulations. *Figure 3* (p. 15) shows minimal queuing at the three-lane release booths with occasional peaks that never exceeded 30 trucks when POV traffic was omitted from the simulations. However, the sensitivity runs of the full pre-inspection implementation included passenger vehicles and *Figure 6* (p. 17) shows the impact they have on the commercial wait times. The queuing at the release booths extended over a larger duration of the day with maximum values between 40 and 50 trucks.

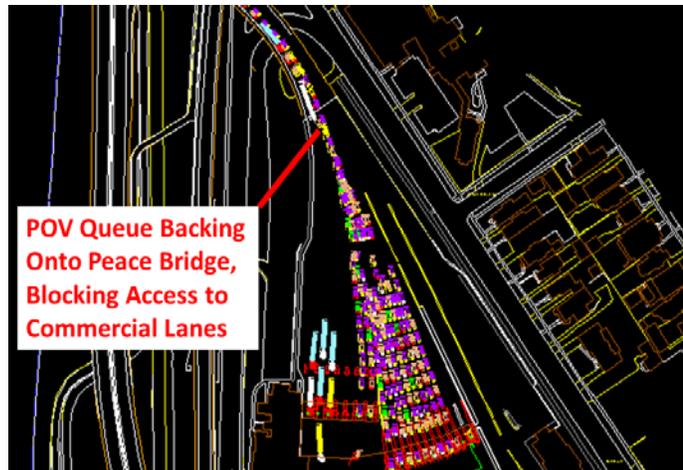


Figure 8 – Simulation Visualization of POV Primary Queuing

The Buffalo and Fort Erie Public Bridge Authority (PBA) is already addressing this issue to some extent through physical infrastructure changes by widening the commercial primary approach apron coming off of the bridge, which will provide more queuing space and move the traffic lane split further back onto the bridge. This will allow for a greater POV primary queue to develop before the vehicles begin to interfere with truck traffic. This is expected to relieve the congestion issue, but will not eliminate it completely as the POV queue will still back onto the bridge on occasion. Another aspect that would help with this matter is that reducing the commercial capacity required in the U.S. plaza would allow for more lanes to be made available for POV primary processing. This would reduce the overall POV queuing and further improve the traffic flow off of the Peace Bridge. However, the only way to fully eliminate the problem would be to physically separate the commercial and POV traffic on the bridge using some sort of barricade or fencing. This would have to be removable, however, in order to maintain the bridge lane flexibility to accommodate multiple lanes into Canada when necessary.

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## Inadequate VACIS Queuing Space

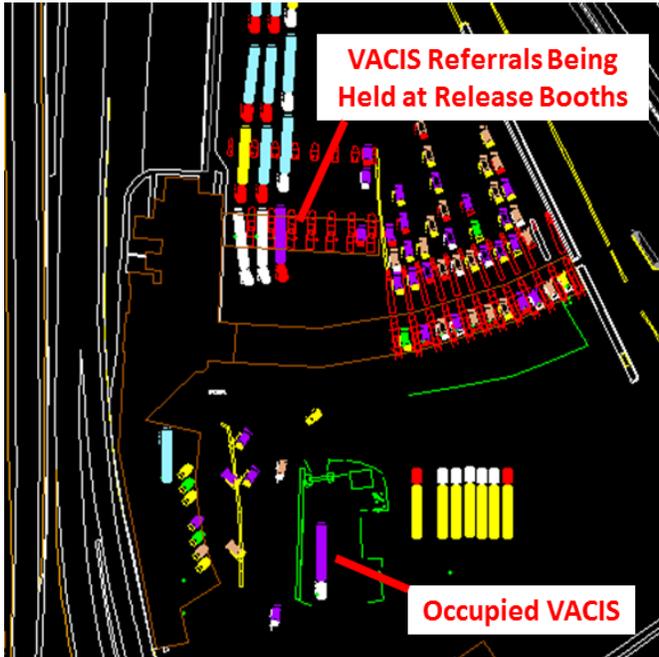


Figure 9 – Simulation Visualization of VACIS Queue

Another known issue within the U.S. plaza is the lack of queuing space at the VACIS inspection area. Currently, when a truck is referred for secondary VACIS screening and the area is already in use, the truck will be held at the primary lane until the scan is complete. As discussed in the **Referral Time** section (p. 11), trucks will remain at the primary booths for an additional two minutes on average and in some instances over ten minutes. As observed during the site surveys and in the baseline simulation, this has adverse effects on the primary queuing resulting in significantly increased wait times. This procedure was even more detrimental to the release booths because of the decreased number of lanes and increased throughput per lane. There was potential for this to occur in all three lanes simultaneously, as illustrated in *Figure 9*, essentially bringing commercial operations to a complete halt.

There are currently efforts underway by CBP and PBA to alleviate this issue. The most immediate relief will come from the upgrade to new RPM equipment. This will significantly decrease the number of trucks listed in *Table 1* (p. 6) requiring RPM Adjudication, which is a major contributing factor to the hold ups at the VACIS. Through a separate simulation analysis, REGAL determined that the new RPM technology could reduce the maximum commercial primary wait time at the existing plaza by approximately 50%, although no evaluation has been conducted at this time to determine the impact on the release booth operations with the implementation of the pre-inspection. Another solution that will soon be implemented is to modify the U.S. plaza configuration to allow VACIS referral trucks to circle around the secondary parking area and queue at the VACIS. That queuing space will accommodate approximately three trucks, enabling the inspecting officers in the primary lanes or release booths to direct the truck to proceed rather than holding it in-line and blocking other traffic from clearing the port. It should be noted that these improvements will not only reduce the commercial waiting times, but could reduce the release booth capacity requirements from three lanes down to two.

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## Post-Plaza Lane 1 Merge

The PBA Administration Building is located immediately beyond the current commercial primary plaza in front of Lane 1. As a result, trucks exiting Lane 1 must immediately merge into the adjacent exit plaza lanes, as illustrated in *Figure 10*. Currently, this vehicle merge occasionally creates a momentary blockage that impedes trucks in Lanes 1 thru 3 from exiting the inspection booth. However, this issue would be exacerbated with the implementation of the release booths because of the increased throughput through the plaza.

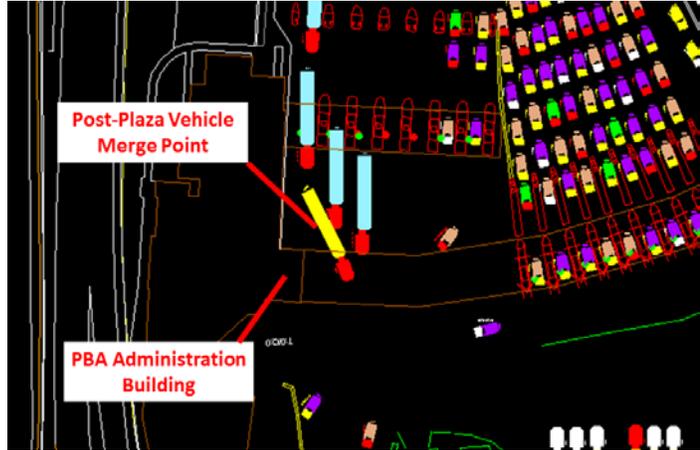


Figure 10 –Visualization of Post-Primary Merge

Unfortunately, there is little operationally that can be done to mitigate these effects. The only foreseeable solution would be an infrastructure change, removing the building from the exit plaza.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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## **Release Booth Operations**

During the July and September site surveys, there were several inefficiencies in the operations and communications between the pre-inspection and the release booth that were either observed or expressed by the inspecting officers that could potentially be rectified with the full implementation. When a shipment was cleared through the pre-inspection, a line item was added to the release booth terminal's main page with specific entry information, such as the trip number, truck cab license plate, and time it was cleared. The inspecting officer in the release booth then used the truck's license plate number to identify the corresponding computer entry and proceed to the appropriate subsequent screen to complete the process. However, the truck list was provided in sequential order based on the trip number so the release booth officer had to search the list to find the corresponding license plate, which would be increasingly difficult after full implementation because the list will grow significantly and may extend beyond the limits of the page. This could be resolved by providing the list in order of the license plate or chronologically by the pre-inspection release time, which would clearly indicate to the officer if an inordinate amount of time had passed since the pre-inspection for some reason. In addition, any license plate corrections made in the system at the pre-inspection were made only to the manifest, but the corrected plate number did not appear on the main screen. Therefore, the release booth officer was unable to find the entry based on the license plate and had to stop the truck to verify that it was cleared to proceed. Making the adjustment to the information on the main screen in the release lane would eliminate the need for that additional stop. There was also concern that using the license plates to determine the red/green status of an approaching truck could be problematic in the winter. During inclement weather, snow and ice can obstruct the license plates, in which case the release booth officers would be forced to stop the trucks to retrieve the plate number from the driver or the manifest before completing the process and allowing it to proceed.

## **System Failure**

Power loss and ACE system outages are situations that do not frequently occur, but can be extremely detrimental to port operations. [REDACTED]

[REDACTED] Without power to the terminals and the ACE system available in the inspection booths, the officers would be unable to identify the shipments and indicate which trucks had been cleared through the pre-inspection and what their referral status was upon reaching the U.S. plaza. Before the pre-inspection program can be fully implemented, a contingency plan must be established to handle these system failures, such as allowing trucks to bypass the pre-inspection and move primary processing back to the U.S. side or institute a backup communication system that will still allow CBP officers on the Canadian side of the bridge to inform officers in the U.S. plaza of a truck's release status. At this time, no feasible or programmatic contingency plan exists and a complete shutdown of the pre-inspection process would be required.

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## ADDITIONAL SCENARIO EVALUATIONS

### ALTERNATIVE APPROACHES TO REDUCING WAIT TIMES (PEAK SEASON)

Several of the areas of concern identified in the previous section were then further evaluated through additional *BorderWizard*™ simulation scenarios. These scenarios were intended to evaluate port configuration and policy changes to the existing port operations that could potentially reduce wait times and serve as alternatives to fully implementing the pre-inspection program. This section briefly summarizes the simulation results for each of the following scenarios during the peak travel season without the implementation of the pre-inspection program:

- Modified U.S. Plaza
- Elimination of Cash Collection at Primary
- Requirement for 100% E-manifest

#### Modified U.S. Plaza

Several of the physical constraint issues that currently exist at the Peace Bridge LPOE, such as the POV queuing in the commercial bridge lane and the lack of VACIS queuing space, are being addressed through renovation and construction projects. CBP and PBA have begun, or plan to begin these projects to resolve or mitigate the following issues identified in *Figure 12*.

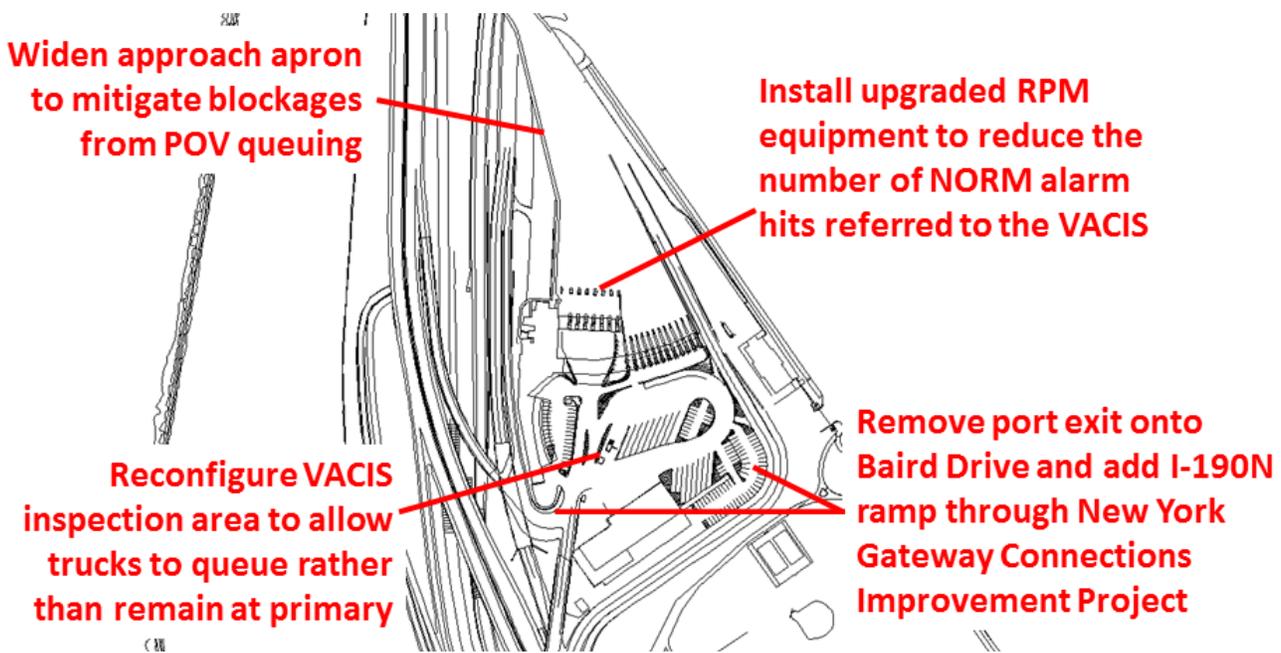


Figure 12 – Planned Port Layout Modifications

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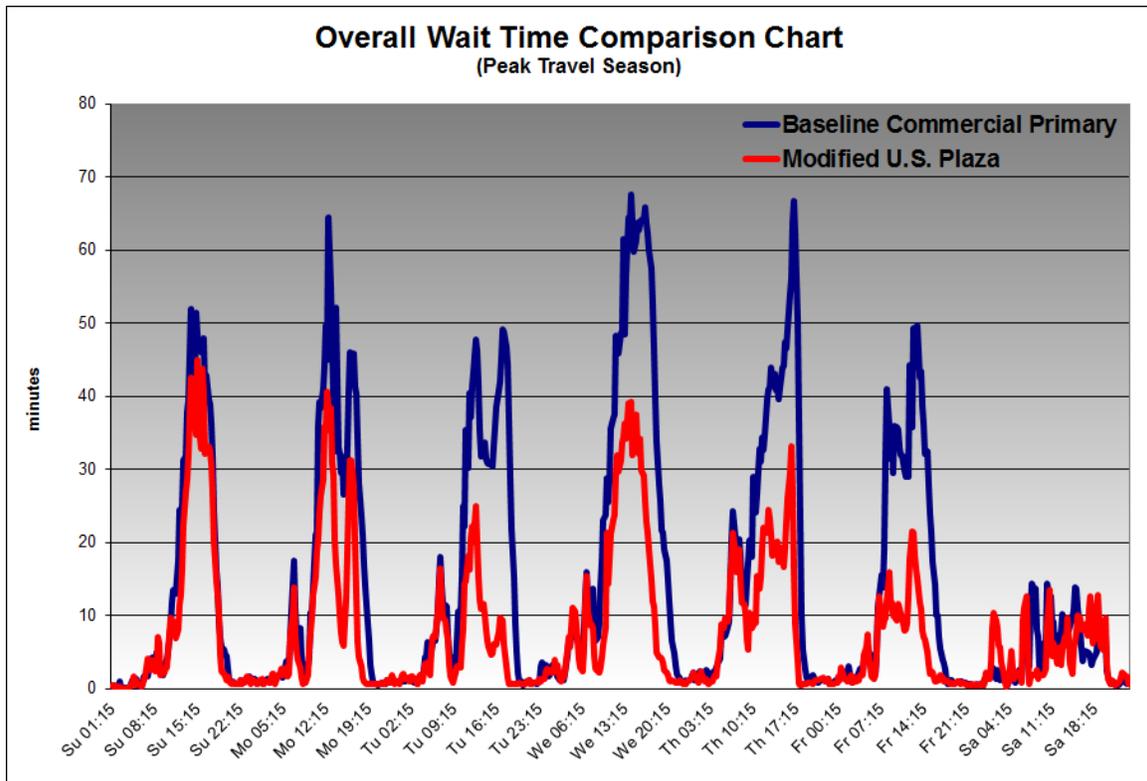
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These port layout adjustments directly impacted the commercial primary processing capabilities in several ways in the *BorderWizard™* simulation. The expanded port approach plaza off the bridge reduced the number of times when the POV queue would create a blockage for trucks attempting to access the primary plaza. The new RPM equipment significantly decreased the number of extended inspections at the VACIS for processing Naturally Occurring Radioactive Material (NORM) alarm hits. In conjunction with the added VACIS queuing space, this drastically reduced the occasions when trucks needed to be held at the primary booths awaiting space at the VACIS. As illustrated in *Figure 13* and *Table 6*, the simulation of the modified U.S. plaza resulted in a queue reduction from the existing condition baseline. On average over the high-demand hours of operation (Sunday 10:00-22:00 and Monday-Friday 5:00-23:00) for the peak travel season, the overall average wait times for the week were decreased by more than 50%.



**Figure 13 – Commercial Wait Time Comparison Chart – Modified U.S. Plaza**

<b>Total Average Wait Time Comparisons During High-Demand Hours of Operation</b>	
<b>Scenario</b>	<b>Overall Average Wait Time for Week Simulation</b>
Baseline Commercial Primary	22.3 minutes
Modified U.S. Plaza	10.9 minutes

**Table 6 – Overall Commercial Wait Time Comparison – Modified U.S. Plaza**

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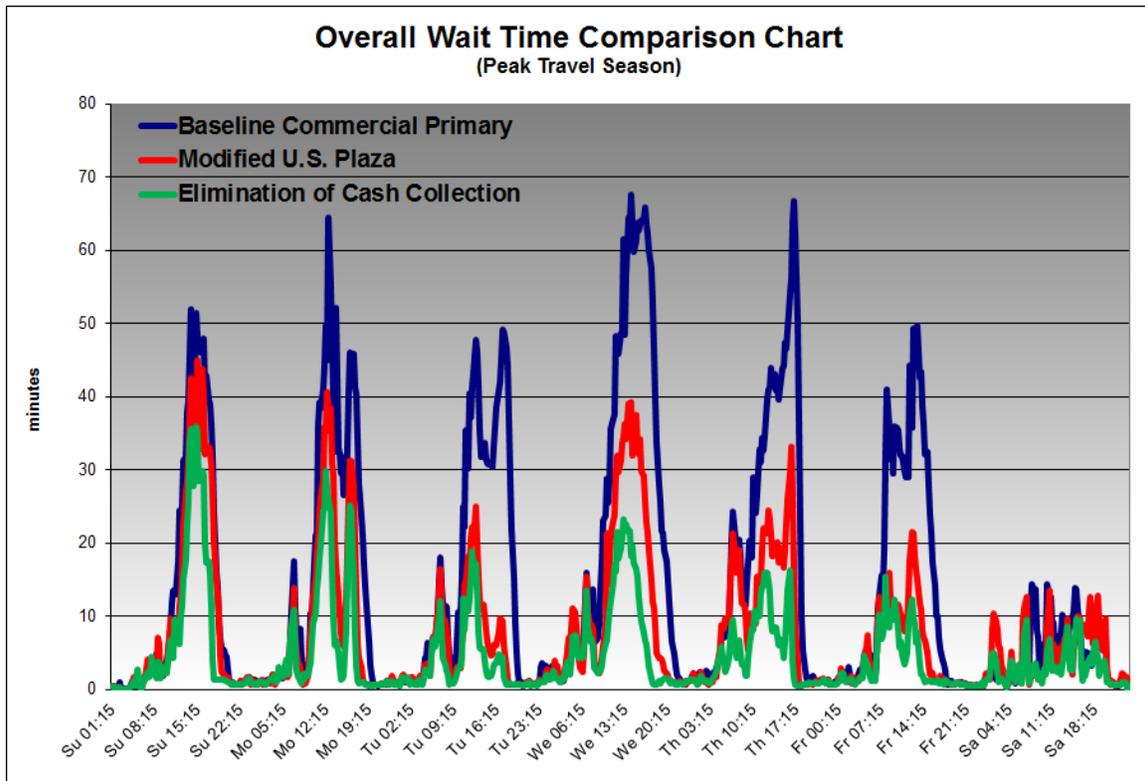


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## Elimination of Cash Collection at Primary

Approximately 90% of trucks crossing the Peace Bridge have a pre-paid user fee transponder on the vehicle. The remaining 10% of trucks must pay this fee to the commercial primary officer by cash or credit card. On average, this component adds nearly 90 seconds per occurrence to the primary processing time. This scenario simulation has been conducted assuming the U.S. plaza modifications have been completed, since the planning or construction for those projects has already begun. As illustrated in *Figure 14* and *Table 7*, eliminating the fee collection phase from the commercial primary process would be successful in further reducing the wait times currently experienced at the Peace Bridge cargo facility. It should be noted that the simulation reflects a small portion of the total commercial volume (1%) that still requires payment and those trucks are referred to secondary parking to pay the fee at the inside counter rather than at the primary booth.



**Figure 14 – Commercial Wait Time Comparison Chart – Elimination of Cash Collection**

Total Average Wait Time Comparisons During High-Demand Hours of Operation	
Scenario	Overall Average Wait Time for Week Simulation
Baseline Commercial Primary	22.3 minutes
Modified U.S. Plaza	10.9 minutes
Elimination of Cash Collection	6.5 minutes

**Table 7 – Overall Commercial Wait Time Comparison – Elimination of Cash Collection**

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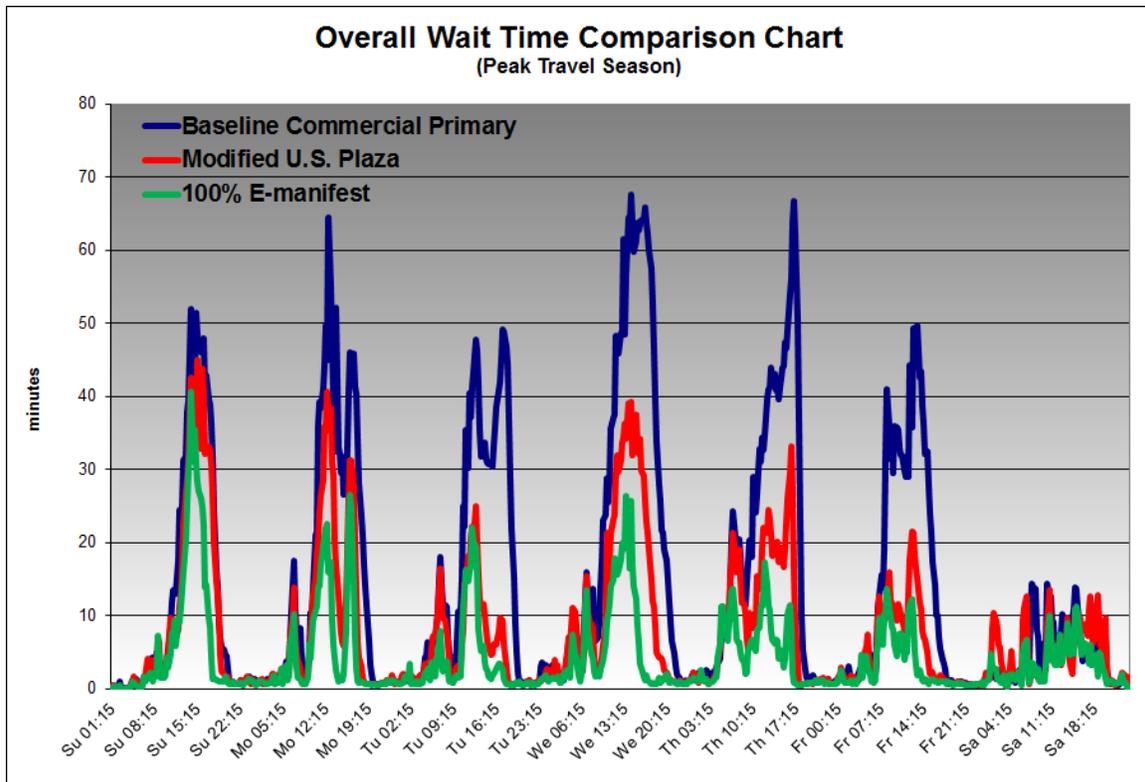


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## Requirement for 100% E-manifest

There currently is no requirement for empty trucks crossing the Peace Bridge to file an E-manifest prior to their arrival. Additionally, a small portion of loaded trucks arrive at the port without pre-filing the necessary forms as well. This situation requires the primary booth officer to perform considerably more data entry, increasing the amount of time the truck remains in the primary lane. This scenario simulation is intended to determine the potential wait time savings if policy changes were implemented to require empty trucks to file an E-manifest and to send any non-compliant trucks to secondary rather than completing the process at primary. Again, this scenario was evaluated assuming the U.S. plaza modifications have been completed. *Figure 15* and *Table 8* indicate that such policy implementations would also be a successful approach to reducing the commercial primary wait times.



**Figure 15 – Commercial Wait Time Comparison Chart – 100% E-manifest**

<b>Total Average Wait Time Comparisons During High-Demand Hours of Operation</b>	
Scenario	Overall Average Wait Time for Week Simulation
Baseline Commercial Primary	22.3 minutes
Modified U.S. Plaza	10.9 minutes
Requirement for 100% E-manifest	5.9 minutes

**Table 8 – Overall Commercial Wait Time Comparison – 100% E-manifest**

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## Elimination of Cash Collection and Requirement for 100% E-manifest

This final peak season scenario simulation evaluated the impact of applying both the cash collection elimination and the 100% E-manifest requirement policy changes to the modified U.S. plaza. According to the simulation wait time outputs provided in *Figure 16* and *Table 9*, implementing these changes to the port layout and operations could significantly reduce the commercial wait times during the peak travel season to an overall average of just over four minutes with peaks only reaching 20 minutes. Comparing this output to the results of the full implementation scenarios in *Figure 7* and *Table 5* (p. 18), it is evident that these layout configuration and policy changes could be even more effective for reducing commercial primary wait times than building out the pre-inspection plaza on the Canadian side of the Peace Bridge.

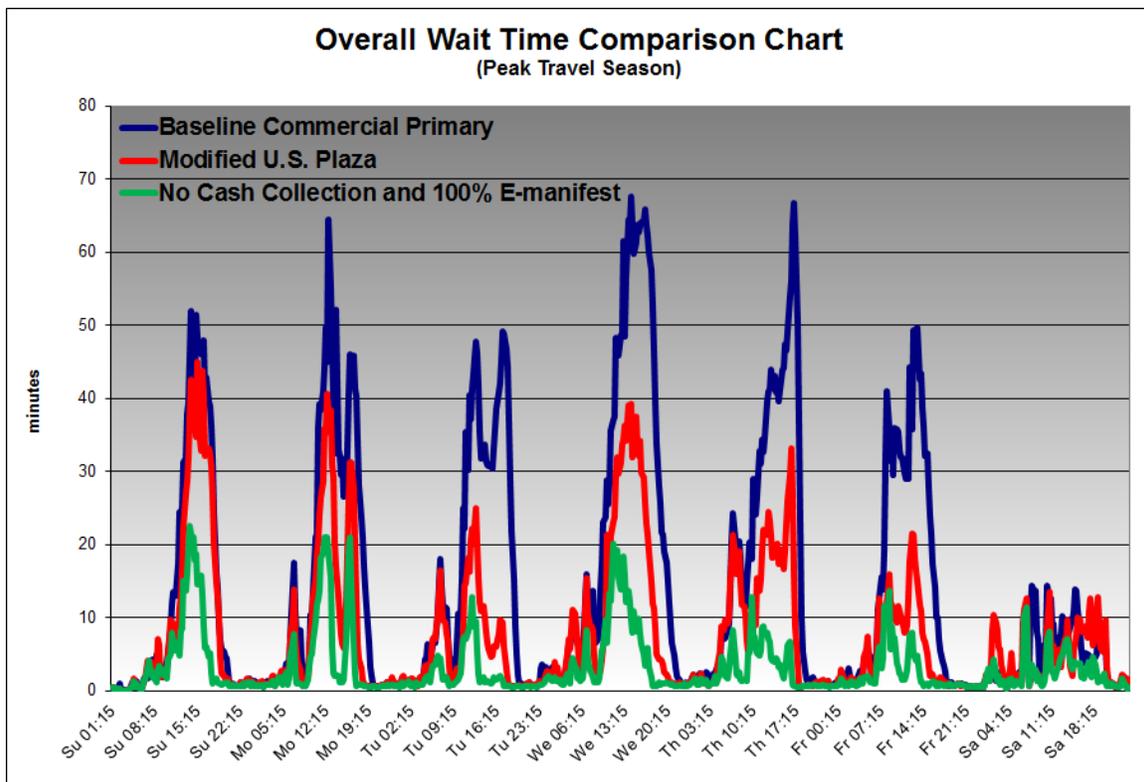


Figure 16 – Commercial Wait Time Comparison Chart – No Cash Collection and 100% E-manifest

Total Average Wait Time Comparisons During High-Demand Hours of Operation	
Scenario	Overall Average Wait Time for Week Simulation
Baseline Commercial Primary	22.3 minutes
Modified U.S. Plaza	10.9 minutes
No Cash Collection and 100% E-manifest	4.2 minutes

Table 9 – Overall Commercial Wait Time Comparison – No Cash Collection and 100% E-manifest

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## NON-PEAK SEASONAL COMPARISON

As previously discussed, the commercial primary plaza is often operating at reduced capacity during the peak August travel periods because the bi-level booths are frequently assigned to process passenger vehicle traffic. As a result, trucks experience significantly higher wait times during these periods even though the commercial traffic volume remains consistent. As illustrated in *Figure 17*, these seasonal travel demand spikes in passenger vehicle traffic occur in July and August, while there is very little fluctuation in commercial volume over the year. With lower passenger vehicle volumes during the non-peak seasons, trucks crossing the Peace Bridge for the majority of the year do not have to endure the bridge blockages and resulting wait times that are experienced during those peak travel months. This section examines the baseline and pre-inspection wait times during non-peak operations to determine if the same benefits shown in *Table 5* (p. 18) will be applicable to the remainder of the year.

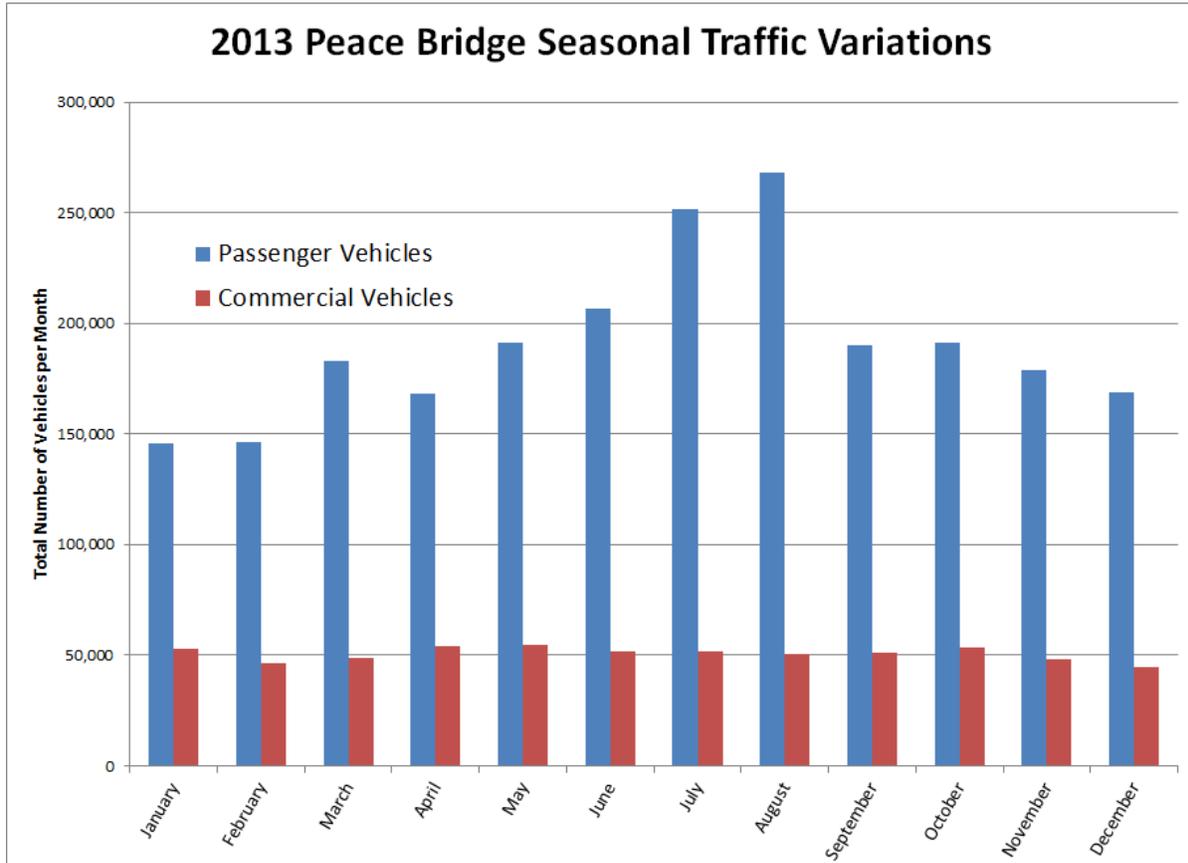


Figure 17 – 2013 Monthly Vehicle Arrival Totals

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## Non-Peak Season Baseline

To reflect the non-peak operations, the baseline simulation was updated with the December 2013 non-peak baseline arrival figures. *Table 10* provides the traffic volume totals from the peak August 2013 scenario simulations discussed above and the non-peak December 2013 *BorderWizard™* baseline experiment. The simulation was also updated to reflect non-peak primary scheduling which allows all seven truck lanes to be available for commercial processing during weekday operations.

Total Week Traffic Volume Comparison		
Scenario	POV Traffic	Commercial Traffic
Peak August 2013 Baseline	60,211	11,755
Non-Peak December 2013 Baseline	31,530	12,112

Table 10 – Seasonal Traffic Volume Comparison Chart

*Figure 18* shows the difference in commercial primary wait time outputs between the peak and non-peak baseline simulations. Despite having comparable commercial traffic volumes, the non-peak baseline wait times are significantly lower because the commercial primary plaza was operating at full capacity and no booths were being converted to process POV traffic.

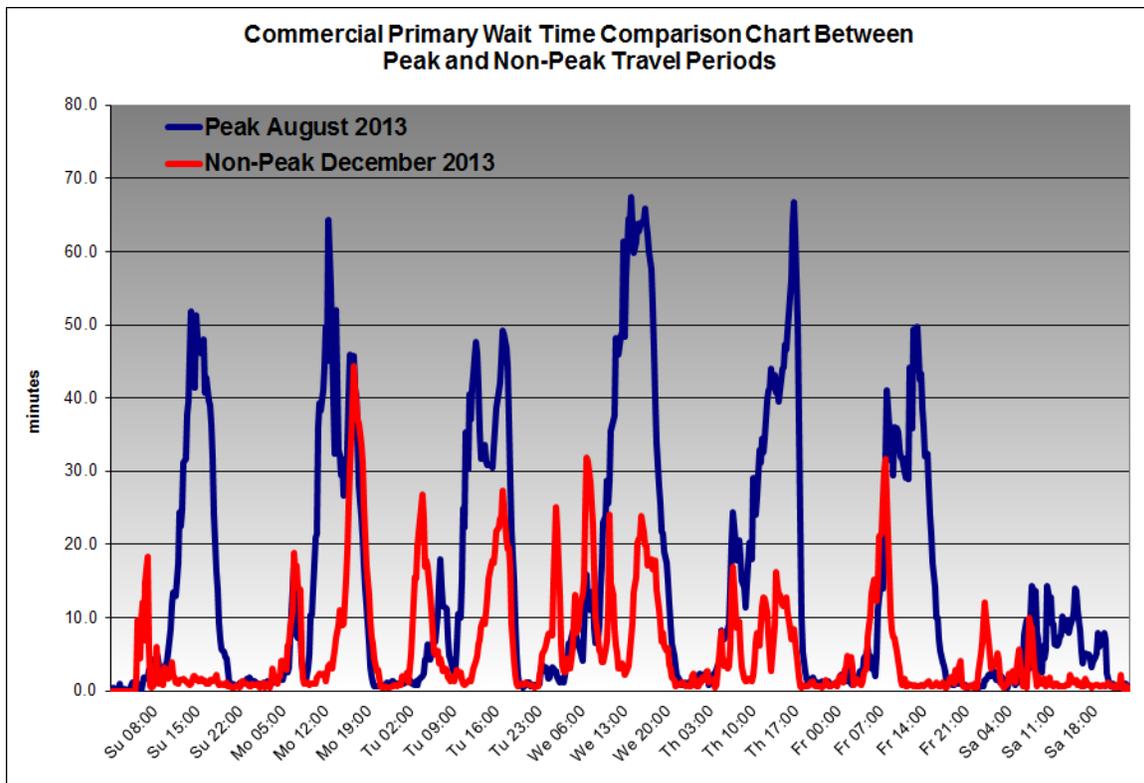


Figure 18 – Peak and Non-Peak Baseline Wait Times

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## Non-Peak Season Pre-Inspection

A similar comparison was then made between the peak season and non-peak season wait times with the full pre-inspection implementation scenarios. As seen in *Figure 4* (p. 16), there was very little difference in the pre-inspection wait times for the three scenarios (8 lanes, 10 lanes, and 12 lanes). Therefore, this additional comparison scenario focuses solely on the 8-lane pre-inspection capacity. Similarly to the peak pre-inspection scenario, the total non-peak commercial wait times have been determined by combining the pre-inspection plaza wait times and the release booth wait times for the full week. This is illustrated in *Figure 19* and compared to the peak season pre-inspection simulation output. The two data sets portray very similar trends with occasional spikes occurring during the week. However, there was no queuing during the weekend in the non-peak simulation as the lesser POV volume did not generate the bridge queuing experienced in the peak season analysis.

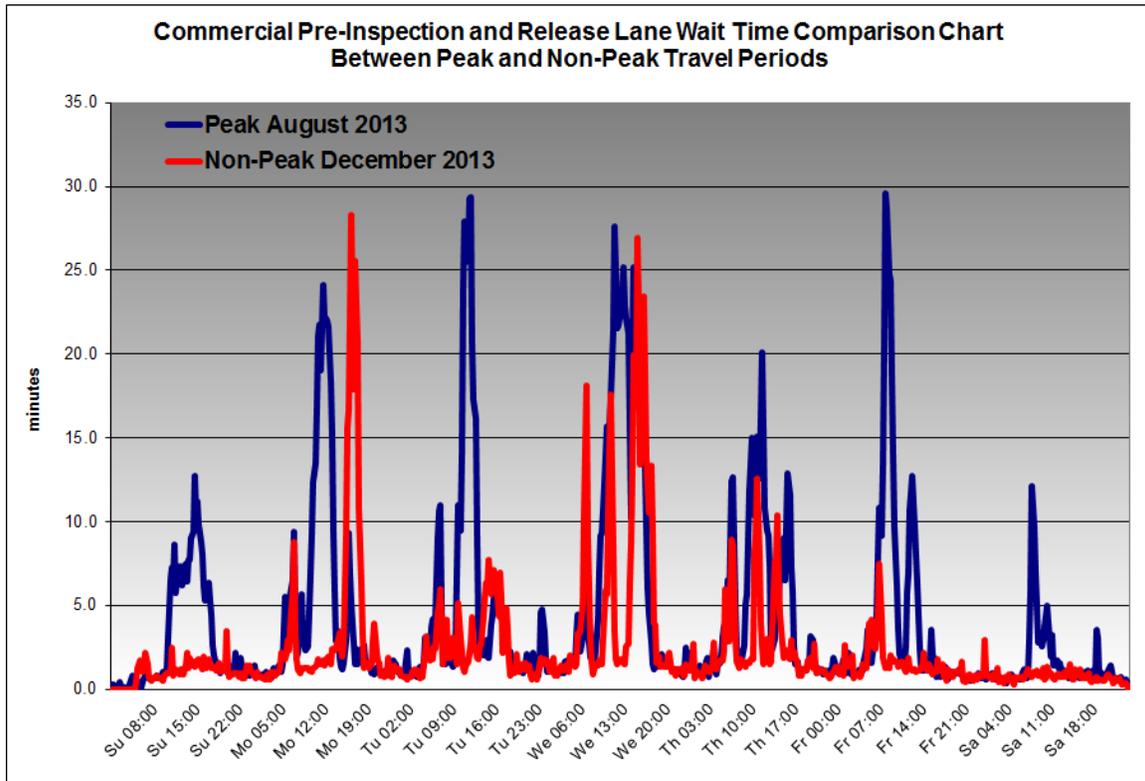


Figure 19 – Peak and Non-Peak Pre-Inspection Simulation Wait Times

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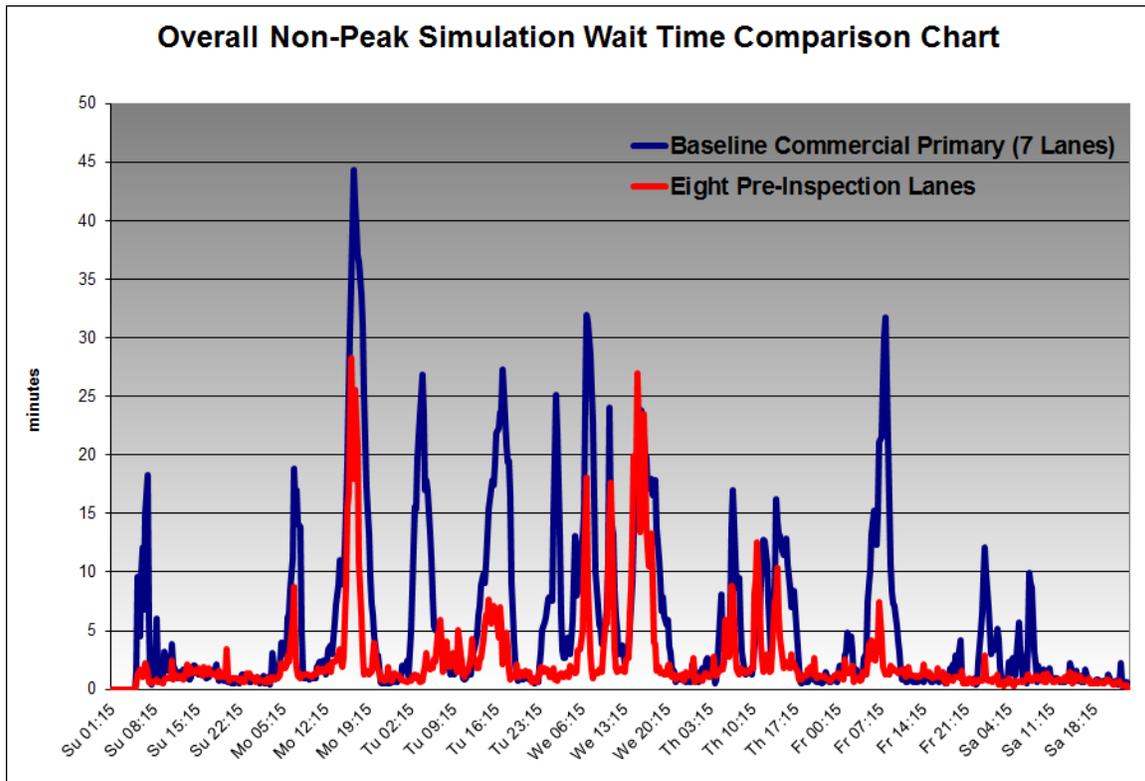
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Similarly to the peak season pre-inspection comparison results seen in *Figure 7* and *Table 5* (p. 18), the non-peak baseline simulation wait time results were then compared to the non-peak pre-inspection and release lane wait times to determine what benefits could be gained by fully implementing the pre-inspection program. As illustrated in *Figure 20* and *Table 11*, the full implementation simulation of the pre-inspection program resulted in a queue reduction; however not to the extent that was found for the peak season simulation. Over the full non-peak week during the high-demand hours of operation (Sunday 10:00-22:00 and Monday-Friday 5:00-23:00), the average wait time was reduced by over 50% with the full implementation of the pre-inspection program, with peak savings as high as 30 minutes.



**Figure 20 – Commercial Wait Time Comparison Chart – Non-Peak Travel Season**

Total Average Wait Time Comparisons During High-Demand Hours of Operation	
Scenario	Overall Average Wait Time for Week Simulation
Baseline Commercial Primary (7 lanes)	7.0 minutes
Eight Pre-Inspection Lanes	3.3 minutes

**Table 11 – Overall Commercial Wait Time Comparison – Non-Peak Travel Season**

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## **ALTERNATIVE APPROACHES TO REDUCING WAIT TIMES (NON-PEAK SEASON)**

Similarly to the additional peak season scenarios, several alternative approaches were evaluated to determine their impact on cargo wait times during the non-peak travel season as compared to the pre-inspection implementation. This section briefly summarizes the simulation results for each of the following scenarios during the non-peak travel season without the implementation of the pre-inspection program:

- Additional Commercial Primary Lane
- Modified U.S. Plaza
- Elimination of Cash Collection at Primary
- Requirement for 100% E-manifest

### **Additional Commercial Primary Lane**

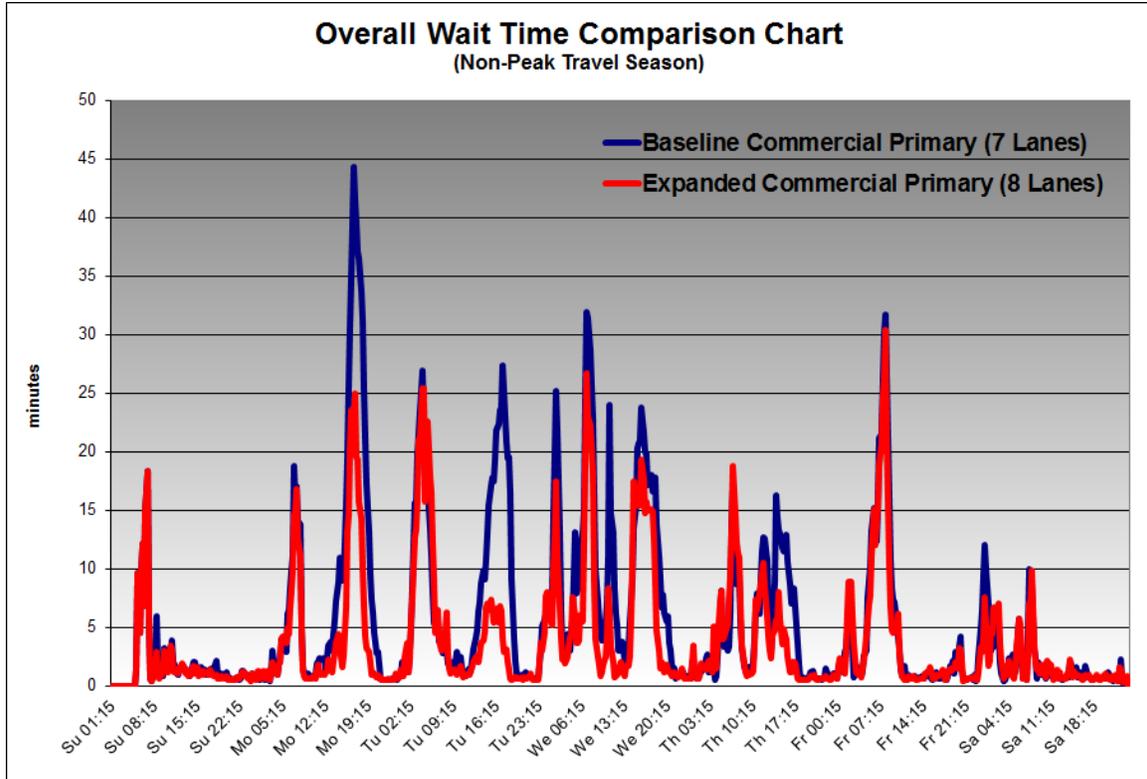
One alternate solution to reducing commercial primary wait times would be to increase the number of available primary processing lanes. Primary lane 8, the west-most lane in the POV primary plaza, is a wider lane that is large enough to accommodate buses. According to CBP, this lane could be converted to another bi-level booth lane capable of processing trucks when necessary. This potential solution was not evaluated for the peak season in the previous sections because it is only applicable to non-peak season. During the peak travel season, the POV primary is operating beyond full capacity and therefore the additional bi-level booth would not be available for commercial use. *Figure 21* (p. 33) illustrates the wait time savings over the full week simulation by implementing an eighth commercial primary lane during the high-demand commercial hours. Wait times can be reduced significantly when the queues are strictly a result of insufficient primary capacity. However, there are several occasions when the peak queues are not reduced because the cause is external, such as a VACIS queue blockage or POV primary queuing on the bridge. As indicated in *Table 12* (p. 33), there is an overall time savings over the full duration of the simulation; however it is slightly less than observed with the pre-inspection scenario in *Table 11* (p. 31).

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**Figure 21 – Commercial Wait Time Comparison Chart – Eight Commercial Primary Lanes**

<b>Total Average Wait Time Comparisons During High-Demand Hours of Operation</b>	
<b>Scenario</b>	<b>Overall Average Wait Time for Week Simulation</b>
Baseline Commercial Primary (7 lanes)	7.0 minutes
Expanded Commercial Primary (8 lanes)	4.4 minutes

**Table 12 – Overall Commercial Wait Time Comparison – Eight Commercial Primary Lanes**

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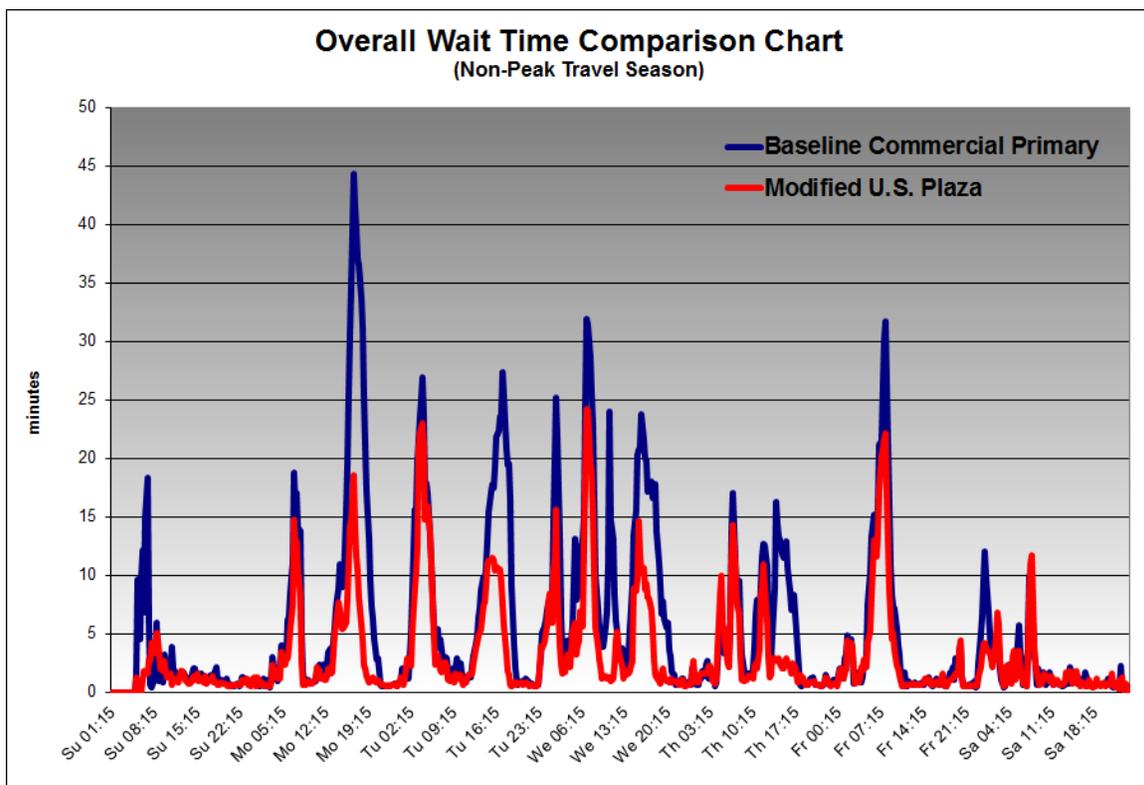


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## Modified U.S. Plaza

The non-peak season simulation was then evaluated with the port layout modifications described in *Figure 12* (p. 23). Though there are fewer instances of POV queuing onto the bridge during the non-peak travel season, there were still significant gains in throughput as a result of the changes to the VACIS area. *Figure 22* and *Table 13* show the *BorderWizard™* simulation wait time output reductions for the individual spikes and the overall average during the high-demand hours of operation (Sunday 10:00-22:00 and Monday-Friday 5:00-23:00).



**Figure 22 – Commercial Wait Time Comparison Chart – Modified U.S. Plaza (Non-Peak)**

<b>Total Average Wait Time Comparisons During High-Demand Hours of Operation</b>	
<b>Scenario</b>	<b>Overall Average Wait Time for Week Simulation</b>
Baseline Commercial Primary	7.0 minutes
Modified U.S. Plaza	3.6 minutes

**Table 13 – Overall Commercial Wait Time Comparison – Modified U.S. Plaza (Non-Peak)**

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## **CBP Policy Changes**

As with the peak travel season scenarios, the modified U.S. plaza was then reevaluated with the CBP policy changes that would eliminate the cash collection from the primary inspection process and require all trucks to have a corresponding E-manifest filed in the ACE system. *Table 14* and *Table 15* show the impacts of independently implementing these policy changes after the completion of U.S. plaza construction. *Table 16* provides the overall average wait time output if both policy changes were to be put in place concurrently.

<b>Total Average Wait Time Comparisons During High-Demand Hours of Operation</b>	
<b>Scenario</b>	<b>Overall Average Wait Time for Week Simulation</b>
Baseline Commercial Primary	7.0 minutes
Modified U.S. Plaza	3.6 minutes
Elimination of Cash Collection	2.5 minutes

**Table 14 – Overall Commercial Wait Time Comparison – Elimination of Cash Collection (Non-Peak)**

<b>Total Average Wait Time Comparisons During High-Demand Hours of Operation</b>	
<b>Scenario</b>	<b>Overall Average Wait Time for Week Simulation</b>
Baseline Commercial Primary	7.0 minutes
Modified U.S. Plaza	3.6 minutes
Requirement for 100% E-manifest	2.7 minutes

**Table 15 – Overall Commercial Wait Time Comparison – 100% E-manifest (Non-Peak)**

<b>Total Average Wait Time Comparisons During High-Demand Hours of Operation</b>	
<b>Scenario</b>	<b>Overall Average Wait Time for Week Simulation</b>
Baseline Commercial Primary	7.0 minutes
Modified U.S. Plaza	3.6 minutes
No Cash Collection and 100% E-manifest	1.7 minutes

**Table 16 – Overall Commercial Wait Time Comparison – No Cash Collection and 100% E-manifest (Non-Peak)**

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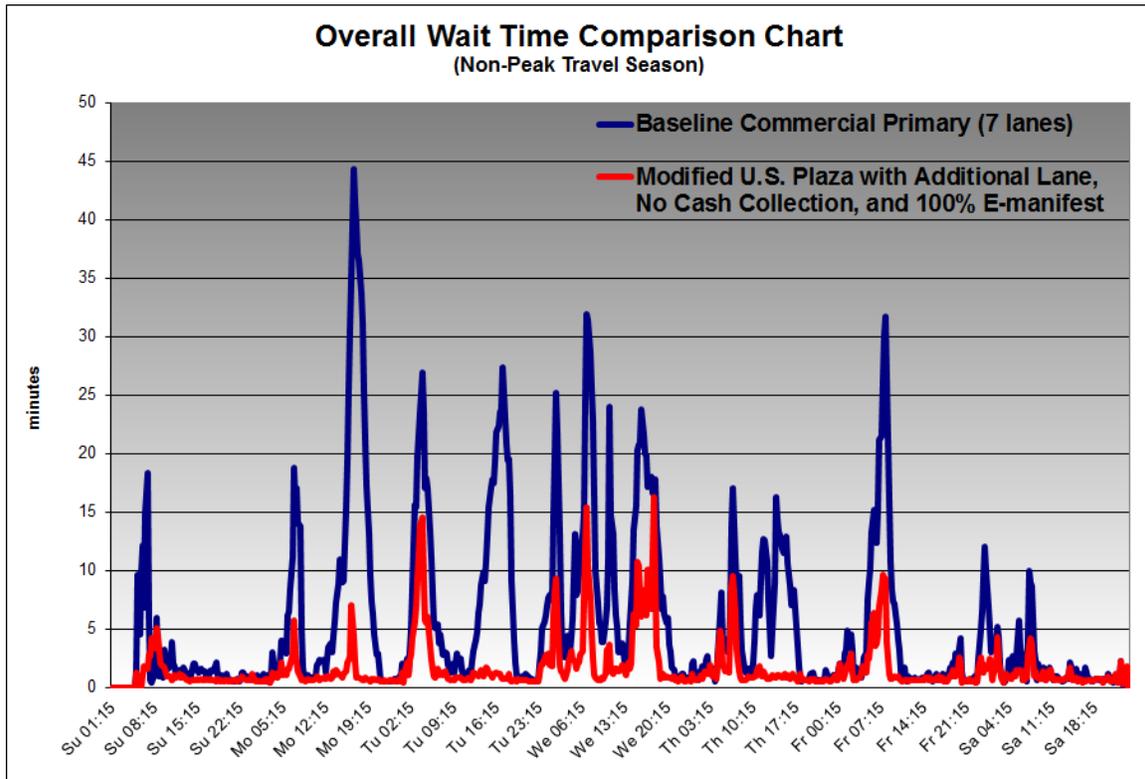


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## **CBP Policy Changes with Additional Commercial Primary Lane**

The final simulation scenario reflects the elimination of cash collection at primary, requirement for 100% E-manifest, and conversion of Lane 8 to a bi-level booth after the completion of the port modification renovations. *Figure 23* and *Table 17* illustrate the potential wait time savings that could be expected by completing these four changes without accounting for the full implementation of the pre-inspection program. The non-peak season wait times have been cut considerably, with peaks of about 15 minutes and an overall average less than two minutes.



**Figure 23 – Commercial Wait Time Comparison Chart – All Potential Changes (Non-Peak)**

<b>Total Average Wait Time Comparisons During High-Demand Hours of Operation</b>	
<b>Scenario</b>	<b>Overall Average Wait Time for Week Simulation</b>
Baseline Commercial Primary (7 lanes)	7.0 minutes
Modified U.S. Plaza with Additional Lane, No Cash Collection, and 100% E-manifest	1.6 minutes

**Table 17 – Overall Commercial Wait Time Comparison – All Potential Changes (Non-Peak)**

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## SIMULATION ANALYSIS SUMMARY

The objective of this cargo pre-inspection simulation evaluation analysis is to determine what wait time savings could be gained with the full implementation of the pre-inspection program and compare those benefits to alternative approaches. This analysis report is not intended to recommend a single solution, but to provide supporting information to stakeholders in the decision making process. *Table 18* (p. 38) presents a summary of the findings discussed in the report, allowing for a direct comparison between the various *BorderWizard*<sup>TM</sup> simulation scenarios.

The simulation analysis results indicate that fully implementing the cargo pre-inspection program would significantly improve the port congestion and commercial wait times currently experienced at the Peace Bridge LPOE. As illustrated in *Table 18* for the peak scenarios, the increased capacity of the pre-inspection could reduce the overall commercial wait times by 70 – 75%, essentially eliminating wait times in excess of 30 minutes. However, there are additional factors and concerns to consider:

- This level of improvement is only applicable to the peak travel season in July and August when commercial primary is not operating at full capacity in order to accommodate passenger vehicle traffic. Wait time reductions can also be expected during the non-peak travel periods, but not to the extent shown for the peak season.



- The implementation of the pre-inspection would come at substantial cost, as indicated in *Table 18*. These figures include estimates provided by PBA and CBP for construction and one year of staffing. However, there are also additional expenses such as building maintenance and furnishing that are not included in the implementation cost estimates. See *Appendix A* for more information.
- All agreements and legislation between the U.S. and Canada granting the necessary authorities for CBP Officers working in Canada would need to be approved and in place.

As indicated in *Table 18*, there are several significantly less expensive alternative approaches to reducing cargo wait times that are shown to be viable options. The modifications to the U.S. plaza have already been funded and some construction work is underway. The additional renovation project of converting a POV primary booth to an eighth bi-level commercial booth would further reduce the wait times, but it is important to consider this would not be applicable to the peak travel periods. In addition, there are several policy changes discussed throughout this report that can be implemented at minimal cost with little to no infrastructure modifications that could also have great success in reducing wait times at the Peace Bridge cargo facility, as illustrated in *Table 18*.

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<b>Cargo Pre-Inspection Evaluation Analysis Summary</b>									
Scenario (Season)	Implementation		Max Throughput (all truck lanes open)	Simulation Wait Time Outputs (over full week simulation)					
	Estimated Cost <sup>1</sup>	Estimated Time		< 15 minutes	15 - 30 minutes	30 - 60 minutes	> 60 minutes	Overall Average	
August 2013 - 11,755 trucks	Existing Condition Baseline No Pre-Inspection (Peak Travel Season)	\$0	N/A	170 trucks/hour	68%	9%	20%	3%	22.3 minutes
	Eight Pre-Inspection Lanes (Peak Travel Season)	\$61 million	4+ years <sup>2</sup>	230 trucks/hour <sup>4</sup>	92%	8%	-	-	6.3 minutes
	Ten Pre-Inspection Lanes (Peak Travel Season)	\$64 million	4+ years <sup>2</sup>	287 trucks/hour <sup>4</sup>	94%	6%	-	-	5.8 minutes
	Twelve Pre-Inspection Lanes (Peak Travel Season)	\$67 million	4+ years <sup>2</sup>	345 trucks/hour <sup>4</sup>	95%	5%	-	-	5.4 minutes
	Modified U.S. Plaza No Pre-Inspection (Peak Travel Season)	\$65 million <sup>5</sup>	< 2 years	180 trucks/hour	82%	12%	6%	-	10.9 minutes
	No Cash Collection No Pre-Inspection (Peak Travel Season)	\$500K - \$1 million <sup>6</sup>	< 2 years	193 trucks/hour	91%	8%	1%	-	6.5 minutes
	100% E-manifest No Pre-Inspection (Peak Travel Season)	\$0 <sup>6</sup>	< 2 years	193 trucks/hour	93%	6%	1%	-	5.9 minutes
	No Cash & 100% E-manifest No Pre-Inspection (Peak Travel Season)	\$500K - \$1 million <sup>6</sup>	< 2 years	205 trucks/hour	96%	4%	-	-	4.2 minutes
December 2013 - 12,112 trucks	Existing Condition Baseline No Pre-Inspection (Non-Peak Travel Season)	\$0	N/A	170 trucks/hour	88%	10%	2%	-	7.0 minutes
	Eight Pre-Inspection (Non-Peak Travel Season)	\$61 million	4+ years <sup>2</sup>	230 trucks/hour <sup>4</sup>	97%	3%	-	-	3.3 minutes
	Additional Commercial Lane No Pre-Inspection (Non-Peak Travel Season)	\$500K	< 1 year	195 trucks/hour	93%	7%	-	-	4.4 minutes
	Modified U.S. Plaza No Pre-Inspection (Non-Peak Travel Season)	\$65 million <sup>5</sup>	< 2 years	180 trucks/hour	97%	3%	-	-	3.6 minutes
	No Cash Collection No Pre-Inspection (Non-Peak Travel Season)	\$500K - \$1 million <sup>6</sup>	< 2 years	193 trucks/hour	98%	2%	-	-	2.5 minutes
	100% E-manifest No Pre-Inspection (Non-Peak Travel Season)	\$0 <sup>6</sup>	< 2 years	193 trucks/hour	98%	2%	-	-	2.7 minutes
	No Cash & 100% E-manifest No Pre-Inspection (Non-Peak Travel Season)	\$500K - \$1 million <sup>6</sup>	< 2 years	205 trucks/hour	100%	-	-	-	1.7 minutes
	Policy Changes & 8th lane No Pre-Inspection (Non-Peak Travel Season)	\$1 - \$1.5 million <sup>6</sup>	< 2 years	235 trucks/hour	100%	-	-	-	1.6 minutes

**Table 18 – Analysis Summary and Scenario Comparison**

**All footnotes can be found on the following page.**

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## Footnotes

- (1) Cost estimates provided by CBP and PBA include construction and staffing, but do not account for other subsequent costs such as maintenance or lease negotiations. These are very preliminary estimates and would be subject to change. See *Appendix A* for more information on the pre-inspection cost estimate determination.
- (2) This estimated time frame provided by CBP includes the time required for inter-agency negotiations and assumes all agreements and legislation between U.S. and Canada are established.



- (4) The max throughput for the pre-inspection scenarios is based on the processing capacity at the pre-inspection plaza on the Canadian side. However, these simulations yielded longer wait times than other scenarios with lesser throughput due to queuing at the release booths in the U.S. plaza.
- (5) The cost estimate for the modified U.S. plaza is the total for all related construction components, including the bridge widening (\$9 million), VACIS relocation (\$200K), and completion of the New York Gateway Connections Improvement Project (\$56 million). The amount included for the New York Gateway Connections Improvement Project consists of the cost for the entire project completion, including modifications at the port such as the removal of Baird Drive and addition of the I-190N ramp as well as construction outside of the port along the extended road networks. It should be noted that these funds have already been allocated and the construction projects have already begun.
- (6) The policy change and additional cargo lane scenarios were evaluated with the U.S. plaza modifications. However, the cost estimates for these scenarios do not include the U.S. plaza modifications and focus solely on the additional funds that would be required to implement the specific solution.

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## APPENDIX A: PRE-INSPECTION COST ESTIMATES

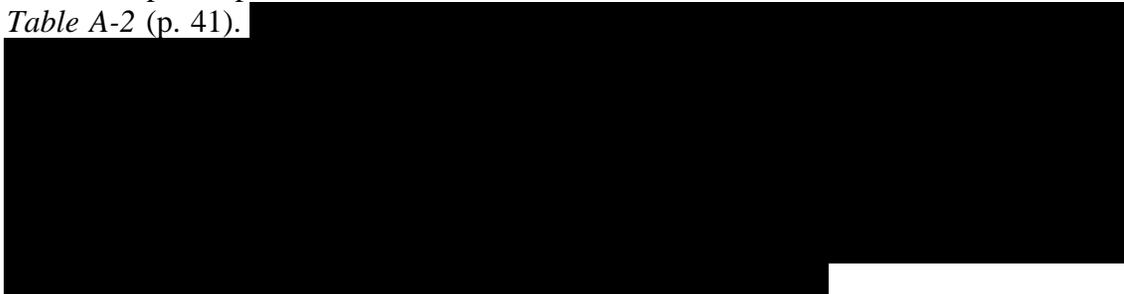
A major contributing factor when deciding the best approach to reducing cargo wait times at the Peace Bridge LPOE is the cost to implement the potential solution. These costs have been included in *Table 18* (p. 38) for consideration when comparing the benefits gained through wait time savings. By far, the full implementation of the pre-inspection program is the most complex approach with many facets to the cost component. As such, a more detailed explanation on how these cost estimates have been determined can be found below.

- There are several costs associated with the full implementation of the pre-inspection process:
  - Construction Costs – As provided by PBA, the estimated cost for constructing the pre-inspection plaza on the Canadian side of the Peace Bridge is approximately **44 million dollars**. It should be noted that these are very early estimates in the project and are subject to change. A specific breakdown of the provided costs can be found in *Table A-1*.

Full Cargo Pre-Inspection Implementation Construction Cost Estimate	
Action	Cost Estimate
Preliminary Studies	\$200,000
Environmental Assessment	\$1,000,000
Stakeholder Relationship Agreements	\$1,000,000
Design and Construction	\$35,000,000
Construction Contingency (20%)	\$7,000,000
<b>TOTAL CONSTRUCTION COST ESTIMATE</b>	<b>\$44,200,000</b>

Table A-1 – Estimated Pre-Inspection Construction Costs

- Staffing and Equipment Costs – Once the pre-inspection facility is built, it is the responsibility of CBP to staff the inspection lanes and incorporate all computer terminals and other necessary technologies. According to CBP, the total projected cost for this task could range from **17 million to 23 million dollars** depending on the number of pre-inspection lanes built. The details of these cost estimates can be found in *Table A-2* (p. 41).



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<b>Full Cargo Pre-Inspection Implementation Staffing and Equipment Cost Estimate</b>		
Scenario	Component	Annual Cost Estimate
8 Pre-Inspection Lanes	Primary Line Officers	\$6,480,204
	Primary Line Supervisors	\$422,622
	Virtual Secure Corridor Camera Monitoring Officers	\$1,972,236
	Primary Line Technologies	\$8,000,000
	<b>TOTAL CBP COST ESTIMATE</b>	<b>\$16,875,062</b>
10 Pre-Inspection Lanes	Primary Line Officers	\$7,748,070
	Primary Line Supervisors	\$422,622
	Virtual Secure Corridor Camera Monitoring Officers	\$1,972,236
	Primary Line Technologies	\$10,000,000
	<b>TOTAL CBP COST ESTIMATE</b>	<b>\$20,142,928</b>
12 Pre-Inspection Lanes	Primary Line Officers	\$8,452,440
	Primary Line Supervisors	\$422,622
	Virtual Secure Corridor Camera Monitoring Officers	\$1,972,236
	Primary Line Technologies	\$12,000,000
	<b>TOTAL CBP COST ESTIMATE</b>	<b>\$22,847,298</b>

**Table A-2 – Estimated Pre-Inspection Full Implementation Costs for CBP**

- Additional Costs – There are several additional areas that will incur costs with the full pre-inspection implementation which are not being included because the cost projections are not available at this time. These include:
  - Annual facility maintenance costs – PBA will be responsible for operating and maintaining the new facility. They have stated that the cost should remain relatively low for the first few years, but will begin to increase exponentially as the facility ages.
  - Equipping the new facility – In addition to equipping the inspection lanes, CBP will be responsible for furnishing the accompanying building with all necessary equipment, furniture, computer terminals, etc.
  - Increased Leasing Cost – There may be additional cost to the U.S. government with the full implementation of the pre-inspection program if PBA and CBP re-negotiate their existing lease to account for the expanded CBP work space.
  - On-site CBSA officer – The agreement for conducting the pre-inspection pilot on Canadian soil stipulated that a CBSA officer had to be present while it was in operation. If that requirement extends to the full implementation as well, there will be a cost to CBSA to staff the site appropriately.
  - On-site police officer – Similarly, the pilot program was being conducted with representatives from the Niagara Regional Police Service (NRPS) on-site. If that is a continued requirement, the NRPS will require the funding to permanently staff the facility.

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## **APPENDIX B: STAKEHOLDER FEEDBACK**

The Peace Bridge is a vital connection between the U.S. and Canada for trade and travel. Port operations at the Peace Bridge LPOE have great impact the economic prosperity of both countries, both in the surrounding areas and nationwide. As such, there is tremendous pressure to ensure that commercial and POV traffic crossing the Peace Bridge are being processed as efficiently as possible while maintaining the high level of security necessary at an international border crossing. There are many individuals and agencies working together with this particular goal in mind. All of the stakeholders involved in the successful maintenance of Peace Bridge operations were provided an opportunity to share their thoughts and feedback on the Peace Bridge Cargo Pre-Inspection Pilot through a distributed survey form. The completed forms can be found in the following section.

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# Cargo Pre-Inspection Pilot Stakeholder Questionnaire



Answers to the following questions should be related only to the two-booth Cargo Pre-Inspection Pilot Program that was operating at the Peace Bridge Land Port of Entry from February 18, 2014 through January 20, 2015. Please limit your responses to the space provided.

Name:

Organization:

Title:

1.) What was your role in the cargo pre-inspection pilot?

PBA constructed the booths and canopy, provided maintenance and utilities and provided logistical support, primarily traffic control.

2.) What impact did the pilot program have on your organization/operations?

During the hours of operation, the net result was one additional customs inspection booth. Resulted in greater throughput and less congestion on the bridge. Required additional staff resources to manage traffic and direct trucks to the pre-inspection booths or to by-pass the booths if the queue extended too far.

3.) What additional costs did the pilot program impose on your organization/operations?

Capital construction cost was approximately \$1million. Maintenance, utilities staffing for the duration are assumed to be \$50,000.

4.) What benefits and/or drawbacks did your organization/operations experience as a result of the pilot?

Benefits were enhanced working relationships with CBP. There were some lessons learned that could be applied regardless of whether pre-inspection is implemented or not (no cash collection in primary booths, better IT infrastructure, eliminate post primary delay by not having non-intrusive inspection right after primary, require e-manifest for all trucks)

Release booth in the U.S. took longer than anticipated to release trucks.

5.) Do you have any additional comments or experiences to share about the pilot?



# Cargo Pre-Inspection Pilot Stakeholder Questionnaire



Answers to the following questions should be related only to the two-booth Cargo Pre-Inspection Pilot Program that was operating at the Peace Bridge Land Port of Entry from February 18, 2014 through January 20, 2015. Please limit your responses to the space provided.

Name:

Organization:

Title:

1.) What was your role in the cargo pre-inspection pilot?

2.) What impact did the pilot program have on your organization/operations?

3.) What additional costs did the pilot program impose on your organization/operations?

4.) What benefits and/or drawbacks did your organization/operations experience as a result of the pilot?

5.) Do you have any additional comments or experiences to share about the pilot?



# Cargo Pre-Inspection Pilot Stakeholder Questionnaire



Answers to the following questions should be related only to the two-booth Cargo Pre-Inspection Pilot Program that was operating at the Peace Bridge Land Port of Entry from February 18, 2014 through January 20, 2015. Please limit your responses to the space provided.

Name:

Organization:

Title:

1.) What was your role in the cargo pre-inspection pilot?

Officer in Charge of NRPS Personnel for pilot.

2.) What impact did the pilot program have on your organization/operations?

Although compensated through funding, two police officers assigned to the project had removed this resource from Uniform Patrol in areas that could otherwise benefit. Further, due to annual vacations, courses, training, and attendance at court, alternate personnel were taken away from their regular duties to cover the full time officers for the project.

3.) What additional costs did the pilot program impose on your organization/operations?

No additional costs, the costs projected were compensated.

4.) What benefits and/or drawbacks did your organization/operations experience as a result of the pilot?

This operation for the NRPS was considered neutral, there was minimal operational drawbacks or benefits. If anything could be stated as beneficial - it was the developing of excellent relations with involved stakeholders.

5.) Do you have any additional comments or experiences to share about the pilot?



# Cargo Pre-Inspection Pilot Stakeholder Questionnaire



Answers to the following questions should be related only to the two-booth Cargo Pre-Inspection Pilot Program that was operating at the Peace Bridge Land Port of Entry from February 18, 2014 through January 20, 2015. Please limit your responses to the space provided.

Name:

Organization:

Title:

## 1.) What was your role in the cargo pre-inspection pilot?

Ontario Trucking Association represents nearly one thousand ON and US based highway carriers that cross the ON-NY border. Most of these trucks are loaded with goods, however some are empty conveyances. Our members regularly participated in the pre-inspection process, as trucks equipped with transponders were selected to use the pre-inspection booth and exit lane on the US side.

## 2.) What impact did the pilot program have on your organization/operations?

Highway carriers were required to educate commercial drivers on the process. The Ontario Trucking Association put together an educational video with assistance and cooperation from US CBP and Peace Bridge Authority. The video was used to help drivers understand the operational impact of the pre-inspection booths by giving them a chance to preview the process.

## 3.) What additional costs did the pilot program impose on your organization/operations?

There were no additional costs incurred to highway carriers as a result of the pre-inspection pilot, however, had extensive delays been the experience, there would have been additional costs. The pilot was very well managed on a day-to-day basis by US CBP officers and PBA staff, therefore delays were mitigated and costs to industry were negligible.

## 4.) What benefits and/or drawbacks did your organization/operations experience as a result of the pilot?

Many drivers cited that while seemingly processed faster through the pre-inspection primary line there were challenges with 1) merging with existing flow of traffic to transit bridge 2) back-ups along the bridge contributing to delays and 3) slow throughput through the exit lane. Carriers indicated that the infrastructure limits of the bridge have effectively limit the potential benefits pre-inspection primary booths could offer. That said, basic overall perception was that it was faster process through primary.

## 5.) Do you have any additional comments or experiences to share about the pilot?

Ontario Trucking Association remains concerned about "FAST" traffic being processed through the same primary lines as non-FAST traffic. Many highway carriers and their customers that have made investments into "Trusted Trader" programs to be deemed low risk and receive expedited passage and processing across the CA-US border. While we support the concept of pre-inspection to increase throughput of commercial traffic, any permanent model needs to consider impact and options to low risk "Trusted Traders" ensuring benefits remain intact and integrity of program is supported.



# Cargo Pre-Inspection Pilot Stakeholder Questionnaire



Answers to the following questions should be related only to the two-booth Cargo Pre-Inspection Pilot Program that was operating at the Peace Bridge Land Port of Entry from February 18, 2014 through January 20, 2015. Please limit your responses to the space provided.

Name:

Organization:

Title:

1.) What was your role in the cargo pre-inspection pilot?

2.) What impact did the pilot program have on your organization/operations?

3.) What additional costs did the pilot program impose on your organization/operations?

4.) What benefits and/or drawbacks did your organization/operations experience as a result of the pilot?

5.) Do you have any additional comments or experiences to share about the pilot?



# Cargo Pre-Inspection Pilot Stakeholder Questionnaire



Answers to the following questions should be related only to the two-booth Cargo Pre-Inspection Pilot Program that was operating at the Peace Bridge Land Port of Entry from February 18, 2014 through January 20, 2015. Please limit your responses to the space provided.

Name:

Organization:

Title:

1.) What was your role in the cargo pre-inspection pilot?

Involved in the vision, development, inclusion in the Beyond the Border agreement and implementation of this initiative at the Peace Bridge.

2.) What impact did the pilot program have on your organization/operations?

Proved the reduction in inspection time/vehicle we envisioned.

3.) What additional costs did the pilot program impose on your organization/operations?

4.) What benefits and/or drawbacks did your organization/operations experience as a result of the pilot?

Proven benefits will occur when process is operational.

5.) Do you have any additional comments or experiences to share about the pilot?

Next step is implementing the process to "stream" low-risk trusted trader trucks to primary to eliminate delay and wait time waiting behind non C-TPAT trucks who had arrived in a monte carlo first come first serve current process.



Answers to the following questions should be related only to the two-booth Cargo Pre-Inspection Pilot Program that was operating at the Peace Bridge Land Port of Entry from February 18, 2014 through January 20, 2015. Please limit your responses to the space provided.

Name:

Organization:

Title:

1.) What was your role in the cargo pre-inspection pilot?

As a sister Agency responsible for admissibility of FDA-regulated products offered for entry, FDA participated in an overview of the Pilot provided by CBP prior to the Pilot's start up date. This was helpful to FDA to determine what impact (if any) the pilot (and ultimately a permanent pre-inspection program) might have on FDA entry review/admissibility at the port of entry. FDA cleared its regulated products arriving at the USA side of the border after pre-clearance was completed.

2.) What impact did the pilot program have on your organization/operations?

No negative impact was observed. After pre-clearance was completed, drivers reported to FDA on the USA side of border for inspection and/or appropriate FDA follow up as necessary.

3.) What additional costs did the pilot program impose on your organization/operations?

None observed.

4.) What benefits and/or drawbacks did your organization/operations experience as a result of the pilot?

After some initial confusion on the drivers' part (some originally believe the pre-clearance by CBP included FDA clearance), no problems were reported.

5.) Do you have any additional comments or experiences to share about the pilot?

FDA appreciated the open communication with CBP and the opportunity provided to FDA to participate in a presentation before going live with the Pilot.



Answers to the following questions should be related only to the two-booth Cargo Pre-Inspection Pilot Program that was operating at the Peace Bridge Land Port of Entry from February 18, 2014 through January 20, 2015. Please limit your responses to the space provided.

Name: Buffalo Field Office

Organization: CBP

Title: Port of Buffalo

1.) What was your role in the cargo pre-inspection pilot?

Fully staffed and managed operations, prepared monthly reporting, and coordinated stakeholder engagement for Phase II on behalf of CBP Field Operations.

2.) What impact did the pilot program have on your organization/operations?

Reallocation of staff and equipment to support the pilot.

3.) What additional costs did the pilot program impose on your organization/operations?

Significant staffing and equipment costs in excess of \$1.8 million.

4.) What benefits and/or drawbacks did your organization/operations experience as a result of the pilot?

Benefits: The pilot provided CBP with a venue for creative ideas and robust participation and cooperation from bi-national government agencies and trade stakeholders. CBP has learned a great deal from this pilot to include transformative initiatives to be explored in improving commercial processing at all U.S. land border ports of entry.

5.) Do you have any additional comments or experiences to share about the pilot?

Excellent cooperation by all stakeholders in making this pilot a reality. CBP would like to thank all involved stakeholders who led the efforts to have this pilot conducted as well as those who participated in its planning, set-up, and operation.



# Cargo Pre-Inspection Pilot Stakeholder Questionnaire



Answers to the following questions should be related only to the two-booth Cargo Pre-Inspection Pilot Program that was operating at the Peace Bridge Land Port of Entry from February 18, 2014 through January 20, 2015. Please limit your responses to the space provided.

Name:

Organization:

Title:

1.) What was your role in the cargo pre-inspection pilot?

Rep. Higgins successfully pushed for the Peace Bridge's inclusion in the Customs and Border Protection pre-inspection pilot program for U.S. bound truck cargo, as called for in the Beyond the Border Agreement. He has also pressed for pre-inspection to be expanded and made permanent. Rep. Higgins has touted the expansion of the pilot as a means of expediting the flow of commerce and promoting economic activity.

2.) What impact did the pilot program have on your organization/operations?

N/A

3.) What additional costs did the pilot program impose on your organization/operations?

N/A

4.) What benefits and/or drawbacks did your organization/operations experience as a result of the pilot?

Commercial stakeholders transiting the Peace Bridge overwhelmingly agreed that moving primary inspections to the Canadian side have the potential to expedite the flow of commerce and result in economic benefits if made permanent and expanded.

5.) Do you have any additional comments or experiences to share about the pilot?

Adopting efficient protocols and improving infrastructure at land ports of entry is critically important to the economic health of Buffalo and other border communities. The permanent implementation of pre-inspection will help achieve these important goals.



# Cargo Pre-Inspection Pilot Stakeholder Questionnaire



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Name:

Organization:

Title:

## 1.) What was your role in the cargo pre-inspection pilot?

In my capacity, both as the Senior Senator from the State of New York and as the Chairman of the Senate Subcommittee on Immigration, Refugees, and Border Security I played a leading role in establishing the Pre-Inspection Pilot Program and in bringing it to the Peace Bridge. Following a February 2011 hearing where Secretary Napolitano said that there was no chance of pre-inspection at the Peace Bridge, I pressured top officials at the Department of Homeland Security to reverse course and bring the program to Buffalo. By the end of 2011 a plan to launch a pre-inspection pilot program had been agreed to by top officials in US and Canada and at that point I began working to ensure that Buffalo would be included in the pilot. Throughout 2012, I personally pressed top officials from both governments, including Secretary Napolitano, Canadian Ambassador Gary Goer, Commissioner Alan Bersin, Canadian Foreign Minister John Baird, and Canadian Minister of Public Safety Vic Towe to ensure that the Peace Bridge be selected as one of the two pre-inspection pilot programs included in the Beyond the Border Agreement.

In October of 2012, I was proud to announce that Secretary Napolitano and her Canadian counterparts had seen the merits of my argument and agreed to name the Peace Bridge as one of the two pilot projects. Since then I have worked tirelessly with officials on both sides of the border to ensure that the pilot project was advanced successfully and that any remaining hold-ups or delays in the program were quickly and fully addressed.

## 2.) What impact did the pilot program have on your organization/operations?

I have been a long-time champion of pre-inspection at the Peace Bridge because I believe it can have an important impact on Western New York. Moving the prescreening process to the Canadian side of the border by fully implementing pre-inspection will mean that any new Peace Bridge plaza on the American side will have greater flexibility during the design process. Furthermore, a more efficient pre-inspection process in Canada will result in fewer delays for truckers carrying goods into the United States, for tourists, and for day visitors seeking to take in Sabres or Bills games, or to shop or dine at New York restaurants and it will greatly improve commerce between businesses on both sides of the border. As Western New York continues to establish itself as a shipping and logistics hub, pre-inspection at the Peace Bridge can help ensure that goods moving into the United States are not held up in lengthy and unnecessary delays.

Currently, 100% of all trucks must go through a congested screening process on the American side of the border, as that congestion builds it has an adverse impact on air quality and commerce and backs up traffic across the bridge and into Canada. Full implementation of the pre-inspection program could help greatly reduce the adverse impact congestion has on air quality and on the Western New York economy.

## 3.) What additional costs did the pilot program impose on your organization/operations?

n/a



# Cargo Pre-Inspection Pilot Stakeholder Questionnaire



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Name:

Organization:

Title:

#### 4.) What benefits and/or drawbacks did your organization/operations experience as a result of the pilot?

The benefits of pre-inspection at the Peace Bridge are numerous and extensive. By working to address congestion of commercial traffic at the Peace Bridge improvements to commerce, air quality, and the Western New York economy can be realized. In addition, pre-inspection allows for greater flexibility when planning any changes to the U.S. Side Plaza, this increased flexibility can help to address the significant plaza issues while limiting community impacts.

In my role as U.S. Senator pre-inspection has also been a valuable tool in growing the Western New York economy. From the Ford Stamping Plant expansion, which relies on an efficient border to move products and parts between Hamburg, NY and Oakville, ON to the planned FedEx Distribution Center in Western New York, pre-inspection has played an important role. Our ability to demonstrate a willingness to address border congestion through pre-inspection has been a key tool in helping to lure these new investments to the region. In personal calls with both the Ford and FedEx CEO, in which I urged them to make these investments, it was abundantly clear that our efforts to address border congestion through pre-inspection was a key driver in their decision making process. These types of investments will not only create hundreds of direct jobs, but will also help to cement Western New York's position as a global leader in shipping and logistics.

Furthermore, as I worked to help ensure the Buffalo Bills remained in Western New York, being able to reassure potential owners that efforts were underway to improve the efficiency at the border was a helpful resource in convincing prospective owners that team could remain profitable in Western New York. The efficient movement of people and goods between Western New York and Southern Ontario is a critical pillar to the success of the entire region.

#### 5.) Do you have any additional comments or experiences to share about the pilot?

As we realize the success of the pre-inspection pilot program our focus must now shift to quickly and fully implementing the program at the Peace Bridge. I will once again work tirelessly, just as I did in securing the pilot program, to ensure that pre-inspection is fully implemented at the Peace Bridge. The benefits of full implementation cannot be understated and I look forward to once again working with leaders on both sides of the border to achieve this shared goal as quickly as possible.

It is also important to acknowledge that pre-inspection, while critical, is not a silver bullet to addressing border congestion in Buffalo. That is why I have to worked hard in Congress to secure the necessary funding to bring an additional 100 border agents to the Buffalo region. These agents, when properly assigned, can ensure that existing booths remain fully staffed at peak travel times and can help to avoid lengthy delays. In addition, we must look toward innovative technologies, like state-of-the-art radiation scanners and high-speed internet that can help reduce the processing time of individual cars and trucks. I will work to ensure the Peace Bridge receives the needed funding to install these important technologies and will continue to look for other ways to help improve the efficiency of this critical border crossing.



# Cargo Pre-Inspection Pilot Stakeholder Questionnaire



Answers to the following questions should be related only to the two-booth Cargo Pre-Inspection Pilot Program that was operating at the Peace Bridge Land Port of Entry from February 18, 2014 through January 20, 2015. Please limit your responses to the space provided.

Name:

Organization:

Title:

### 1.) What was your role in the cargo pre-inspection pilot?

My role was to provide on site CBSA Senior management over site for the duration of the pilot. Provided guidance to front line management on ensuring training was delivered, operating procedures were established, emergency preparedness plans were updated to include the per-inspection zone, communicate out to staff on this initiative.

### 2.) What impact did the pilot program have on your organization/operations?

The pilot was a drain on resources, CBSA committed 2 Border Services Officers for the duration of the pilot. 2 BSO's x 7.5hrs each, 4 days a week. often leaving the main commercial operation to run short during peak periods, in the absence of additional funding. It impacted the commercial overtime budget for the duration of the pilot, need to backfill the two BSO's assigned to pre-inspection.

### 3.) What additional costs did the pilot program impose on your organization/operations?

Overtime costs for backfill of BSO's assigned to pre-inspection on a daily basis. actual figures available upon request.

### 4.) What benefits and/or drawbacks did your organization/operations experience as a result of the pilot?

CBSA benefited through further strengthening our partnership with USCBP; working side by side on a daily basis provided the opportunity to build a front line working level mutual respect between the officers, and management alike.

### 5.) Do you have any additional comments or experiences to share about the pilot?

The overall experience was positive in building on an already strong working relationship between CBSA and our USCBP colleagues.