

Briefing Document

on

# Texas Model Border Crossing Project

Prepared for

Texas Department of Transportation

by

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and

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## Background

U.S.-Mexico trade continues to grow strongly and in 2001 reached \$260 billion in value. Texas ports of entry handled more than 70 percent of this surface trade, more than 85 percent of which moved by truck over distinct NAFTA corridors that link origins and destinations in the United States and Mexico. Border bridges at Texas ports recorded over 6.7 million truck movements in 2000; more than half of these had U.S. origins or destinations outside Texas.

Federal and State inspection agencies have implemented many new technologies and processes to improve the speed and effectiveness of their individual agency missions. Nonetheless, the tracking, routing and managing of trucks through the border station remains largely a manual process. Although delays vary significantly from port to port, virtually all experience peak demands when the system is overwhelmed, creating fertile opportunities for attempts to smuggle illegal or harmful cargo across the border.

The Texas Legislature passed Senate Bill 913, introduced by Senator Eliot Shapleigh (D-El Paso), during the 1999 session. This bill directs the State to determine if the border-crossing process can be expedited to reduce the time it takes for commercial vehicles to pass through the federal inspection processes. In response to this directive, the Texas Department of Transportation (TxDOT) commissioned researchers at two Texas institutions -- the Center for Transportation Research (CTR) of the University of Texas at Austin and the Texas Transportation Institute (TTI) of the Texas A & M University System -- to examine the feasibility of an expedited border process, which would facilitate trade while permitting the federal and state agencies to maintain their inspection responsibilities. A second charge was to determine the potential to enhance security through improved automation and screening. Furthermore, given the pending opening of the U.S. southern border to Mexican trucking companies, the project staff also addressed the need to maintain an effective vehicle safety program at border ports, again while allowing trucks to move more efficiently.

## Summary Findings

*A reduced-stop / no-stop automated border process is feasible for the majority of trucks.*

- Implementation of a computer-aided clearance and tracking system is possible through the use of off-the-shelf technology and U. S. Custom Service's International Trade Data System (ITDS).
- By isolating those trucks requiring additional clearance or inspection, inspection agencies can more deftly target resources and simultaneously expedite trade flow.
- Because of the modular nature, elements of the prototype can be implemented where feasible and appropriate, allowing each port of entry to tailor improvements to the needs and constraints of that particular port.

*Linking the Texas Department of Public Safety (DPS) inspection facilities to the U.S. federal agency facility will foster the vehicle safety compliance levels sought by the State.*

- The safety facility could weigh all northbound trucks to insure that no overweight or unsafe trucks operate on Texas highways and NAFTA corridors.
- All commercial vehicles entering the United States could be checked instantly to confirm valid safety inspection certificates; those not in compliance could be identified quickly and inspected.

*Institutional changes are essential to improving the border processing efficiencies of the prototype system; a bi-national agreement with Mexico would further enhance efficiency*

*The concept is applicable to the entire southern U.S. border.*

## **Methodology**

The project team was tasked with four objectives:

- Expedite the flow of trade,
- Support all federal and state inspection and interdiction missions,
- Enhance security, and
- Provide flexibility for future facility needs.

During development of the draft prototype, the project staff obtained extensive input from stakeholders and other interested groups. More than 300 individuals participated in the outreach process, reflecting the interests of federal inspection agencies, trade communities along the border, and state and local officials.

## **How the new design works**

The recommended prototype includes automated:

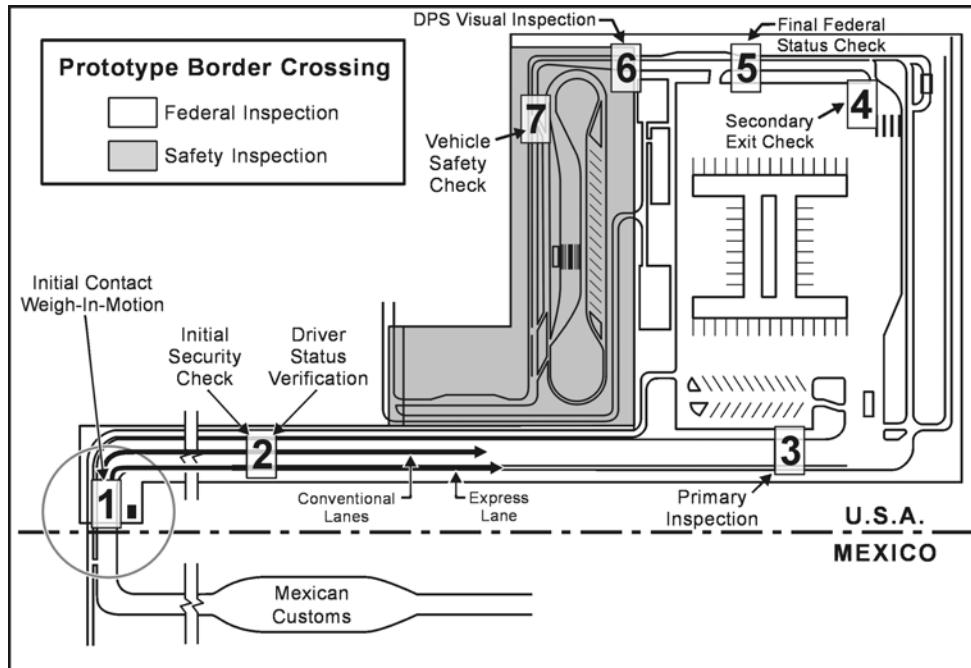
- Vehicle and driver identification,
- Record checking, and
- Vehicle tracking through the border crossing

It allows properly equipped and cleared vehicles to proceed quickly through border stations, unless selected for random inspection or completion of required records.

The proposed process is shown in Figure 1. It includes seven locations where automated processing of eligible vehicles is undertaken. Five of these stations are in the federal facility and two are in the adjoining state vehicle safety inspection facility.

At each station three things would happen:

- The vehicle or driver is identified electronically,
- The status of all paperwork and processing is checked electronically, and
- Instructions are displayed on roadside signs (in two languages) directing the driver where to go next.



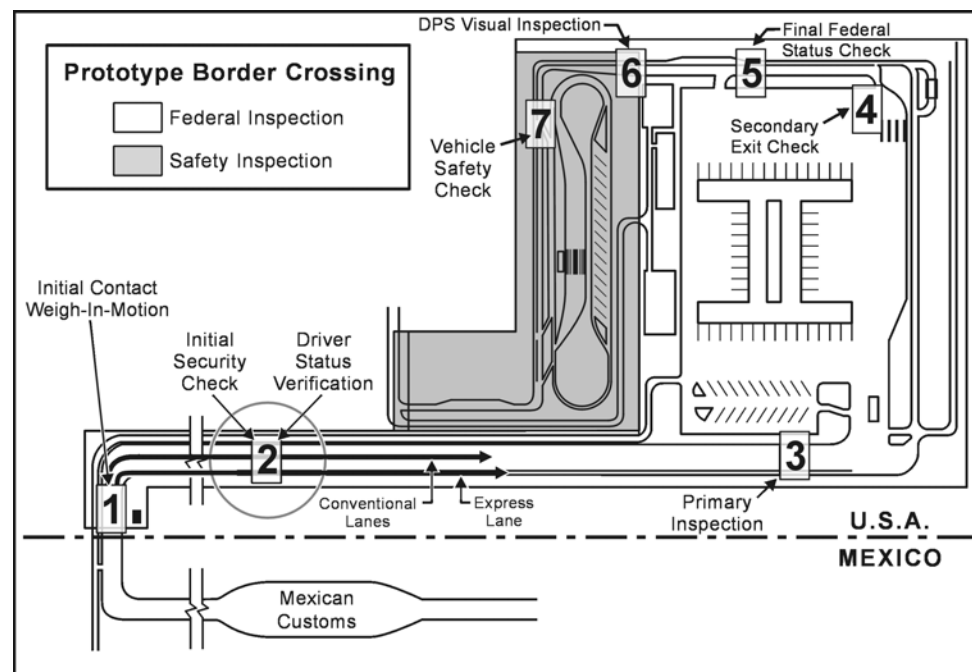
**1** Initial contact with the vehicle is made at the station, the **vehicle is identified** and its **electronic file activated**, the vehicle is weighed by a **weigh-in-motion** system. If overweight the file is flagged for further processing by appropriate agencies. (Ideally, this station would be upstream of the Mexican export station to screen out overloaded vehicles before they cross the border.)

Roadside electronic equipment determines whether the vehicle has correct onboard **transponders** to use the express lane. If there are no transponders, the vehicle is instructed to use conventional inspection lanes and all subsequent procedures follow the current inspection process.

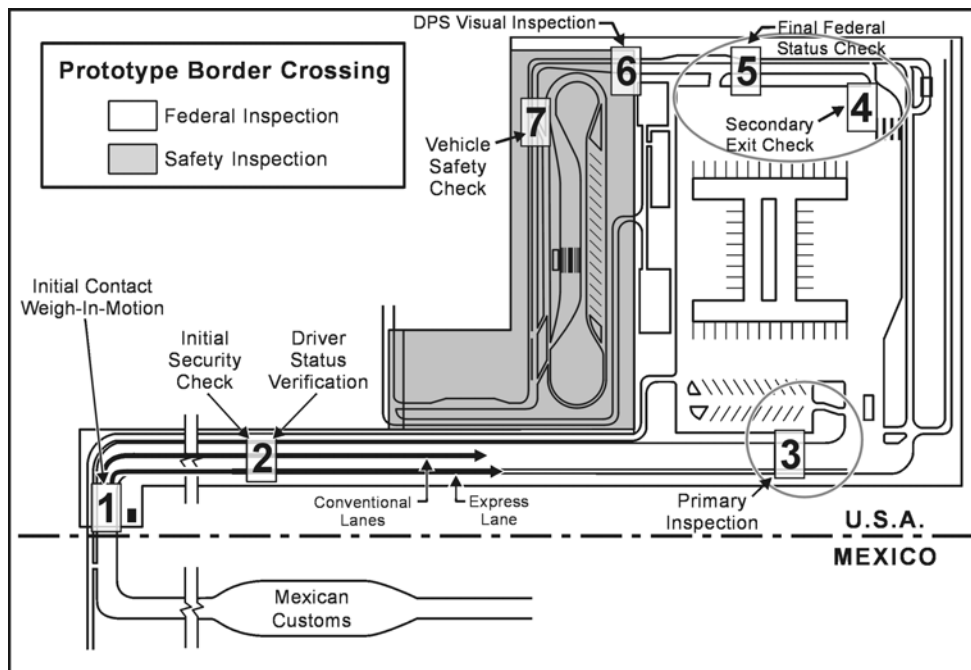
**2** This is the initial security check where **driver** status is checked by video (or other biometric) to confirm identity and immigration status. Video technology is already being tested at various airports and was recently used at the 2001 Super Bowl. It is anticipated that by the time of implementation of the prototype video technology or other biometric identification methods will be reliable and relatively inexpensive, allowing the U.S. Immigration and

Naturalization Service (INS) quickly to identify the driver and review all pertinent records. Any irregularities are addressed at the following station.

This station would be sufficiently distant from the main inspection facility to safely secure suspicious or hazardous materials at reduced risk to life and facilities. If warranted, special protections, such as rapid close barriers could be included.



**3** This station is equivalent to **primary** inspection in the current process and typically the main bottleneck during congested periods. For trucks with traditional paperwork it will be equivalent to a super booth. Random selection will result in the vehicle being sent to a secondary inspection, as will any irregularities involving the driver, tractor, trailer, or cargo. If the vehicle is one that qualifies for the expedited process, these decisions will be made prior to its arrival at the station, meaning that the vehicle in the express lane can pass Station 3 without stopping if all the inspections are clear.

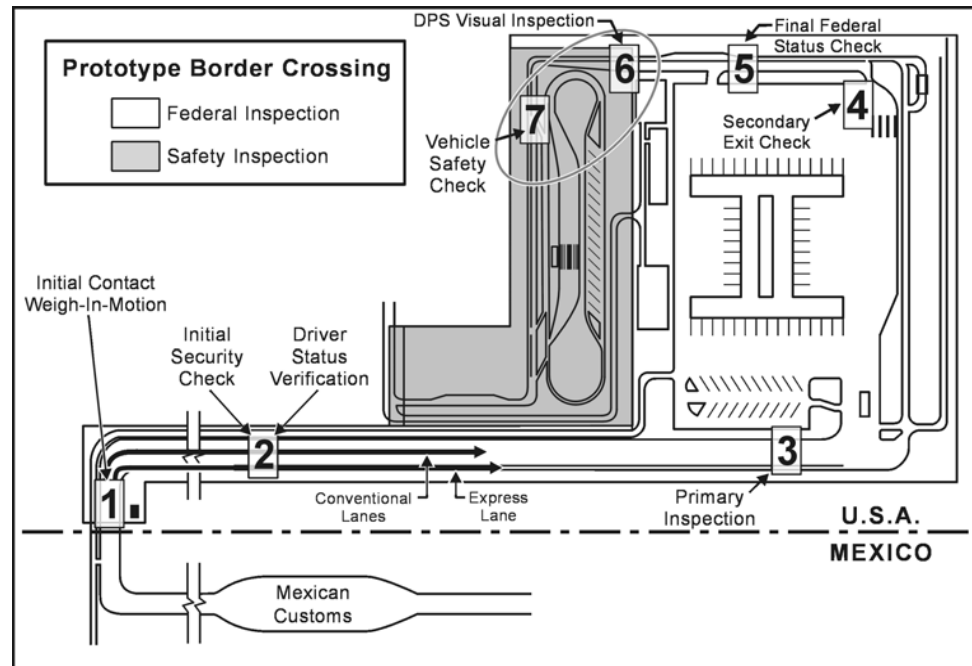


**4** At the exit from the **secondary** (detailed) inspection area, the status of all inspections is checked electronically at this station. The vehicle is tracked to ensure compliance and if it has not been cleared to exit, signing at Station 4 will instruct the driver to return for further processing. This station will ensure that vehicles routed into the secondary inspection area have had their record cleared by those inspectors sent to examine that vehicle.

**5** The final check for the exit from the Federal inspection, this station contains a return loop for vehicles that are not cleared to exit. This check assures that all vehicles using either the express lane or undergoing a secondary inspection have received all necessary clearances before exiting.

**6** Upon exiting the Federal Compound, a visual screening (drive-by) is performed by Texas Department of Public Safety (DPS) to identify any serious roadworthiness deficiencies. This could be done by the physical presence of DPS personnel or through cameras linked to the DPS facility. Vehicles with obvious roadworthiness deficiencies are identified for further inspection at the next station. Simultaneously, electronic records are checked to determine status of license, insurance, registration and weight.

**7** DPS safety inspection is in this separate state facility. This facility will insure that all trucks entering the U.S. meet federal safety and weight laws. It will be scaled to match the demand of the associated federal facility and allow all vehicles to be weighed and a sample inspected for safety compliance. It will contain covered inspection bays and open parking areas, together with by-pass lanes. Traffic from inspections will not be allowed to create congestion that impacts flows within the federal facility. Where it cannot be built immediately adjacent to the federal facility, it will be connected via a secure corridor.



## Summary

This document has described the results of phase one of the project. As detailed in the summary conclusions, the project team has determined that the automation of the crossing process is feasible and will not add substantial additional costs (less than five percent, based on current estimates) above the existing infrastructure cost of border facilities. The opportunity to process conventional traffic more efficiently and to offer expedited processing to those companies able to use the International Trade Data System (ITDS) system is promising.

In the second phase of this project, staff is examining current Texas border ports of entry for the potential of retrofitting certain elements of the prototype process into existing crossings. Working with the U.S. Customs Service managers, other opportunities may be identified to improve current process efficiencies at border ports of entry. The greatest opportunity for efficiency gains will come with the implementation of Customs' ITDS, which will permit the possibility of no-stop passage for most of the truck traffic. Finally, full efficiency will be gained once the process is bi-national in scope. Substantial gains in efficiency will be possible when the process consists of steps on both sides of the border in an integrated fashion.

For more information (including a technical paper) about the prototype development, contact:

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