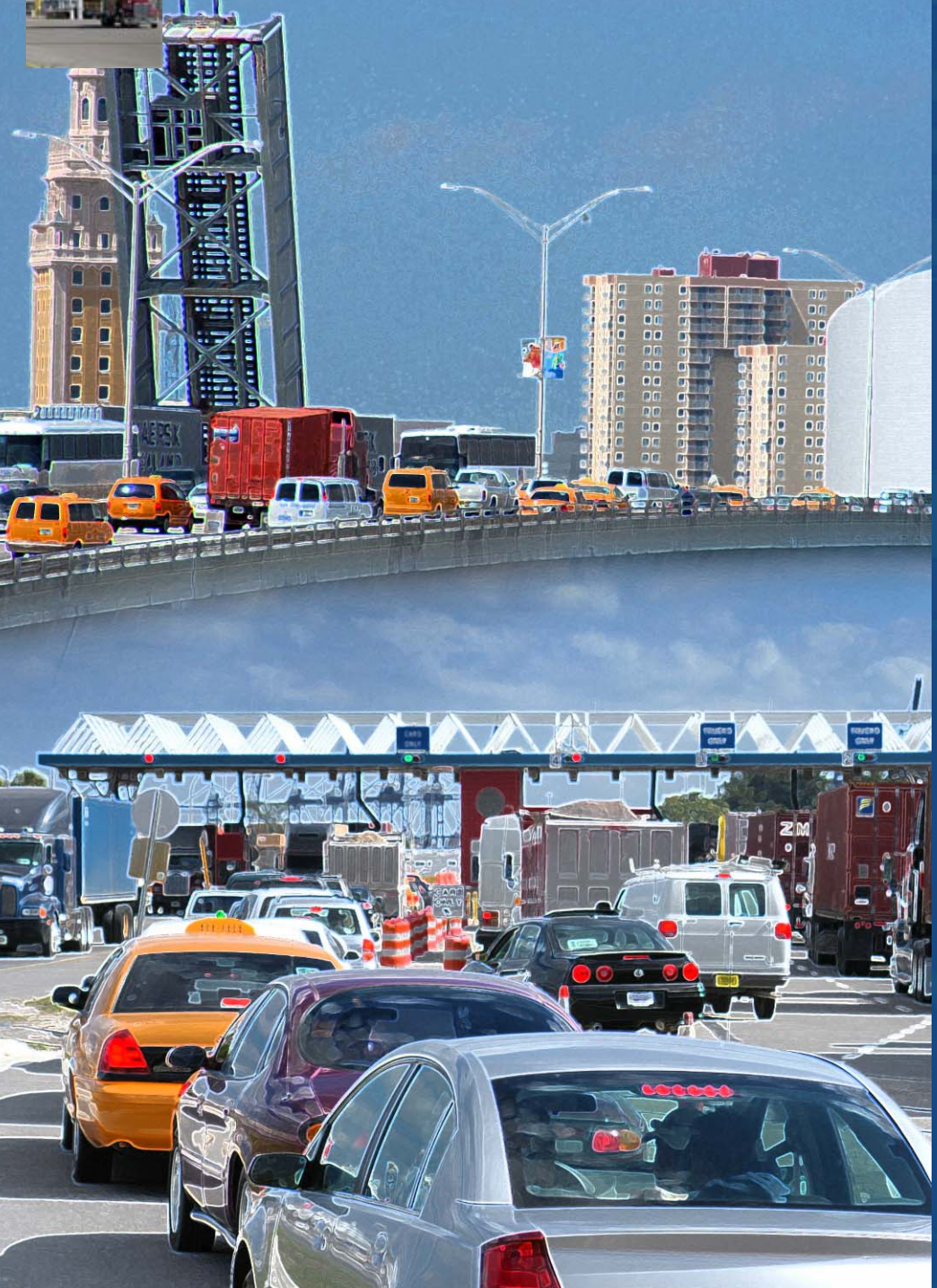
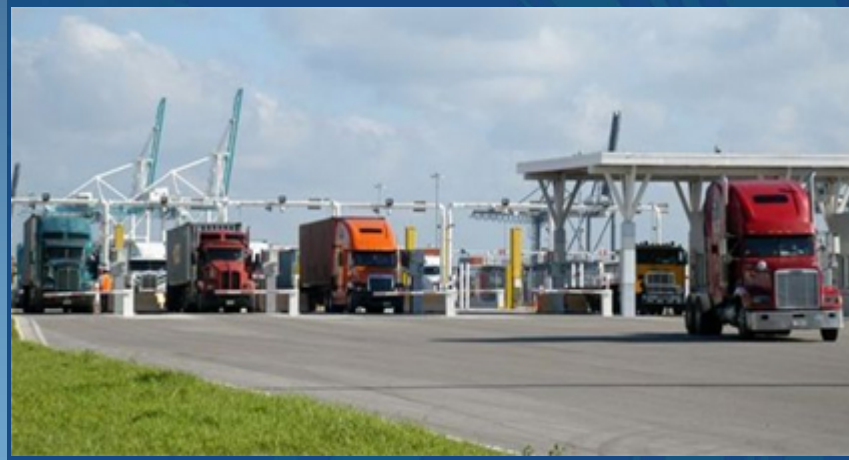


Gate Innovations & Technologies for Improving Throughput, Efficiency and Security

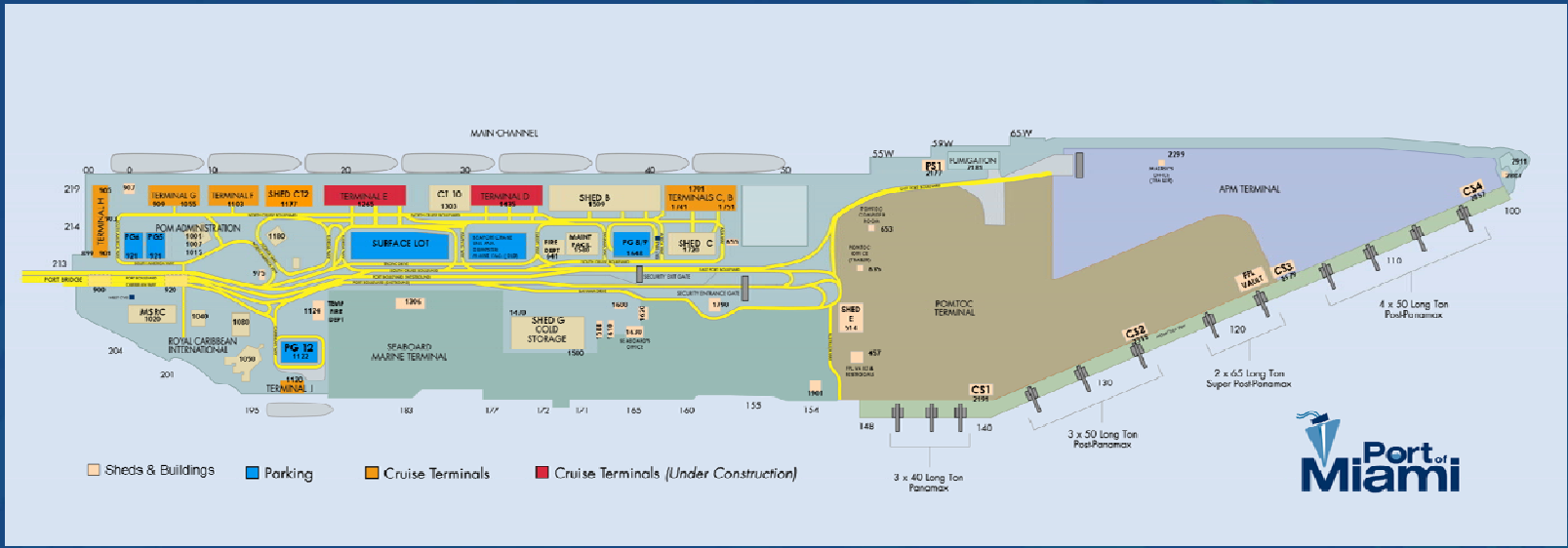


AAPA Annual Convention 2009 Information Technology Award

MIAMI-DADE COUNTY

Port of Miami

Port of Miami



- Acreage: 520
- Miles of Roads (Lanes): 18
- Berths (Number) 17
- Berth Length (Ft.) 19,690
- Water Depth (Ft.) 30, 36, & 42

MIAMI-DADE COUNTY

Port of Miami

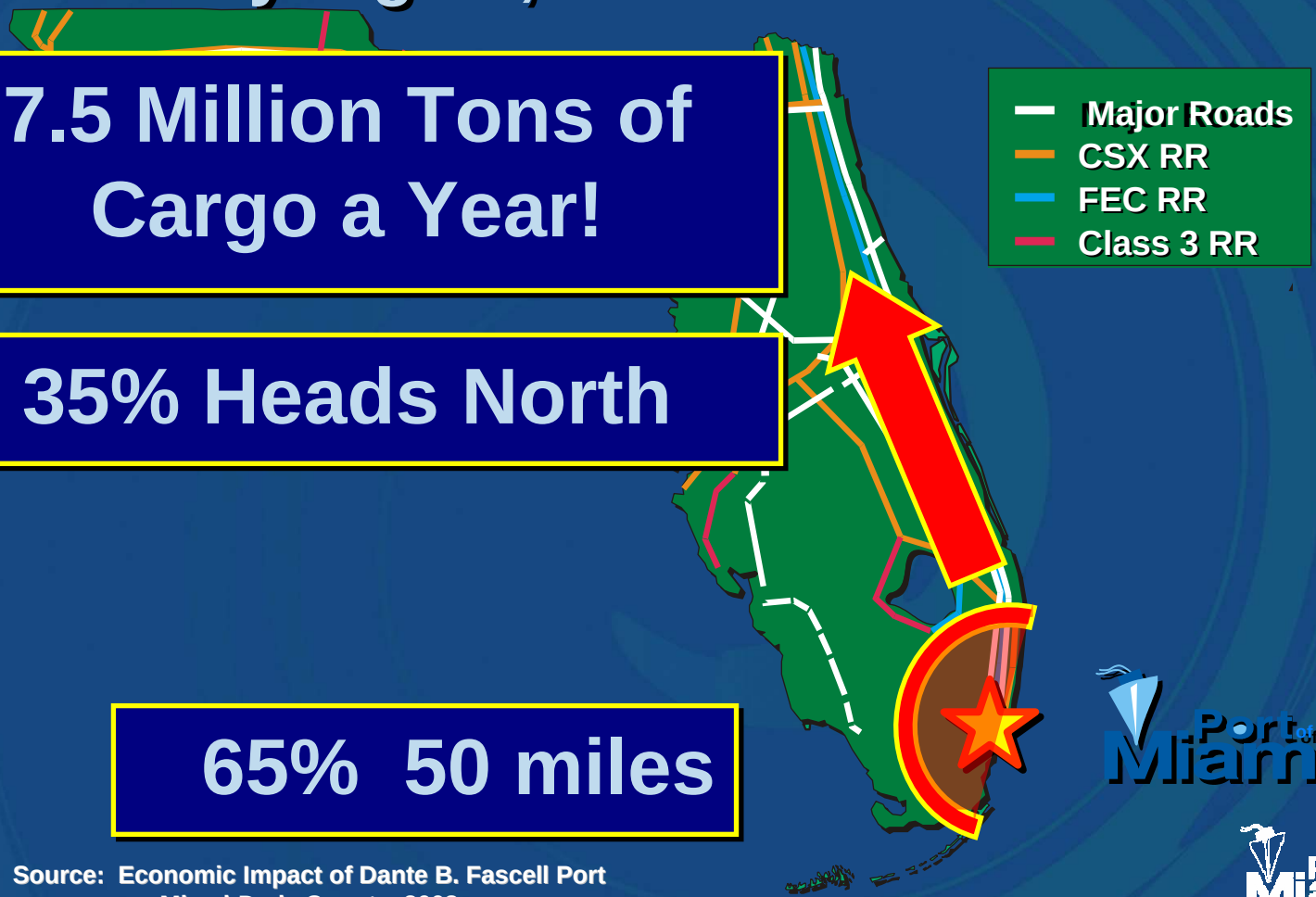
Value of Port of Miami - Cargo

Port of Miami is an important economic engine for Miami-Dade County, the tri-county region, and the state of Florida

7.5 Million Tons of Cargo a Year!

35% Heads North

65% 50 miles



Source: Economic Impact of Dante B. Fascell Port Miami-Dade County, 2008

Vehicular Volume on Bridge

13,600 Vehicles (2,050 Trucks)

24,350 Vehicles (3.600 Trucks)

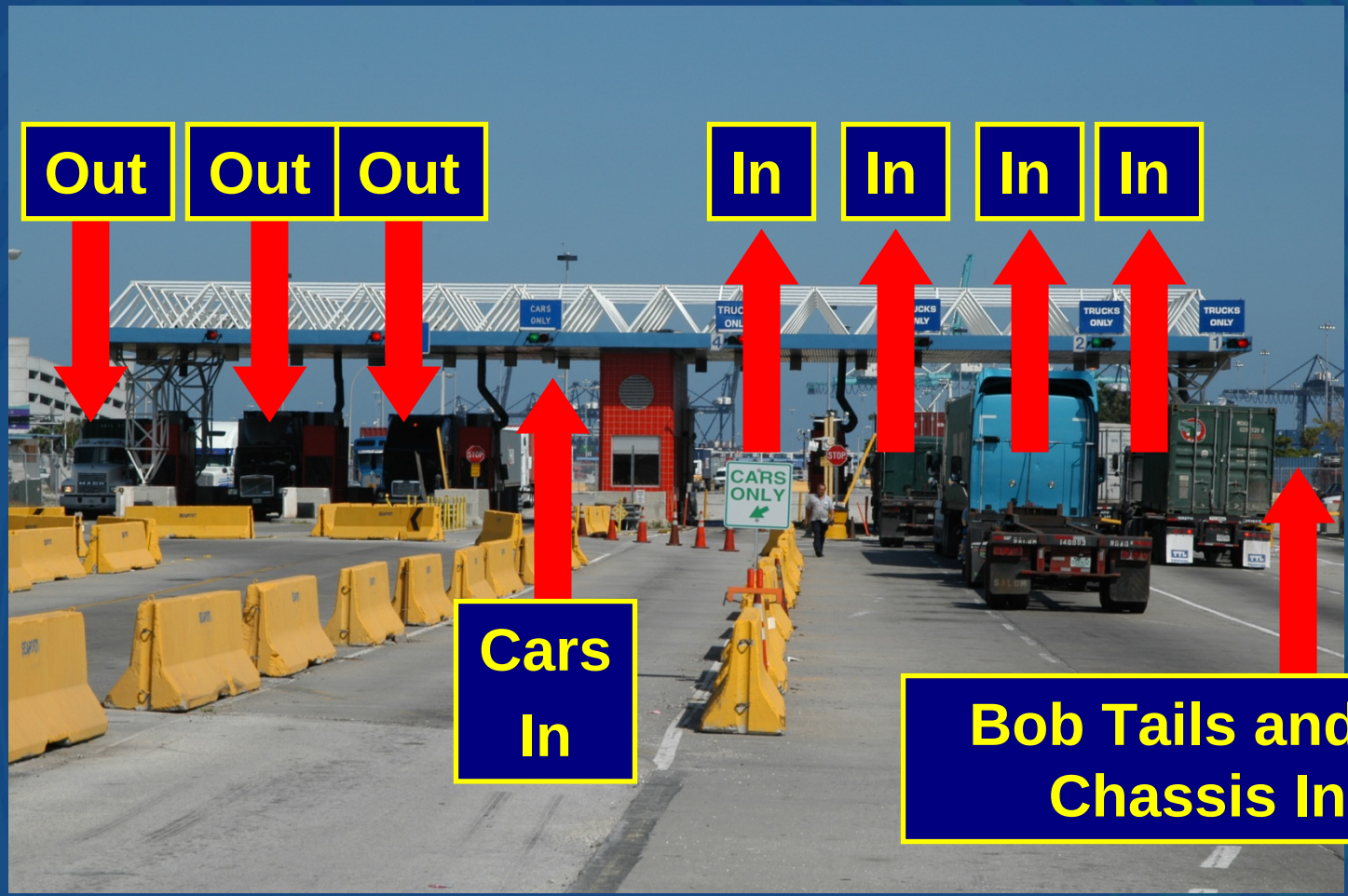
In Each Direction

Every Day

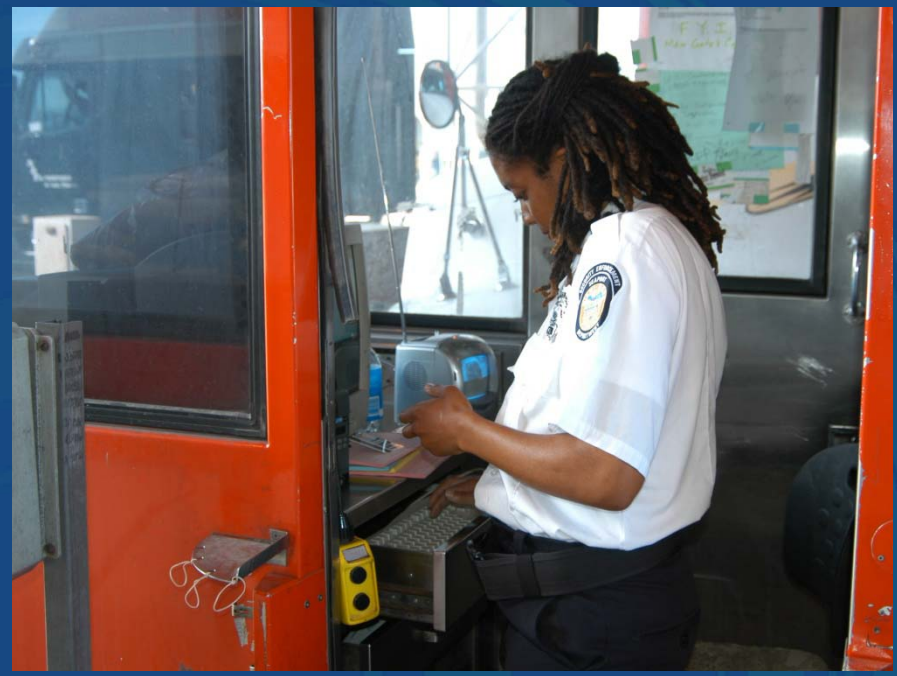
MIAMI-DADE COUNTY

Port of Miami

Previous
Gate Lane Configuration



Previous Gate Operations



- Gate Processing
  - Valid Port ID
  - Verification of Company Permit
  - Manual Entry of Container and Chassis Numbers
  - Weigh Truck (if requested) and Collect Scale Fee
  - Average Processing Time – 2.5 minutes

New Gate Improvements

- 16 Lanes
  - Inbound 10 lanes
    - 7 truck technology only
    - 2 multi-use
    - 1 Personal Vehicle Only (POV)
  - Outbound 6 lanes
    - 4 truck technology only
    - 1 multi-use
    - 1 Personal Vehicle Only (POV)

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New Gate Operations

- Provides arrival date/time for First-In / First-Out cueing purposes
- Pictures of Cab Door to verify Company Name
- Ground Loops and Sensors activate cameras and gate arms

Lane Arrival Portal

Optical Character Recognition acquires the Container, Chassis, Vehicle License Plate Numbers

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Closed Circuit Television Backup to Optical Character Recognition System

Pedestal

FAST PASS (bypass prompts) **or Driver follows easy to use prompts to enter data**

Pedestal

- Initial Point of Contact
- Allows driver to enter information and process themselves
- Gate Operators verify data and approve entry from the Command Center
- Processing for permanent ID Card holders significantly reduces processing time

Multi-use Lanes
Personal Vehicles (Low)
Trucks (High)

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Scales and Collection of Money

Weighing the trucks and hand collection of the fees, takes extra time, therefore delays result

- The Port set up an automatic debit system for the truckers to collect the scale fees; to eliminate money transactions at the gate
- Multi-use lanes still available for cash transactions ($5.00 surcharge for cash transactions)

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Outbound Lanes

- Integrated with U.S. Customs & Border Protection Radiation Portal Monitors
- Bar code Reading of Gate Pass
- OCR Reading of Container and Chassis Numbers
- Arrival & Departure Messages From Cargo Terminals

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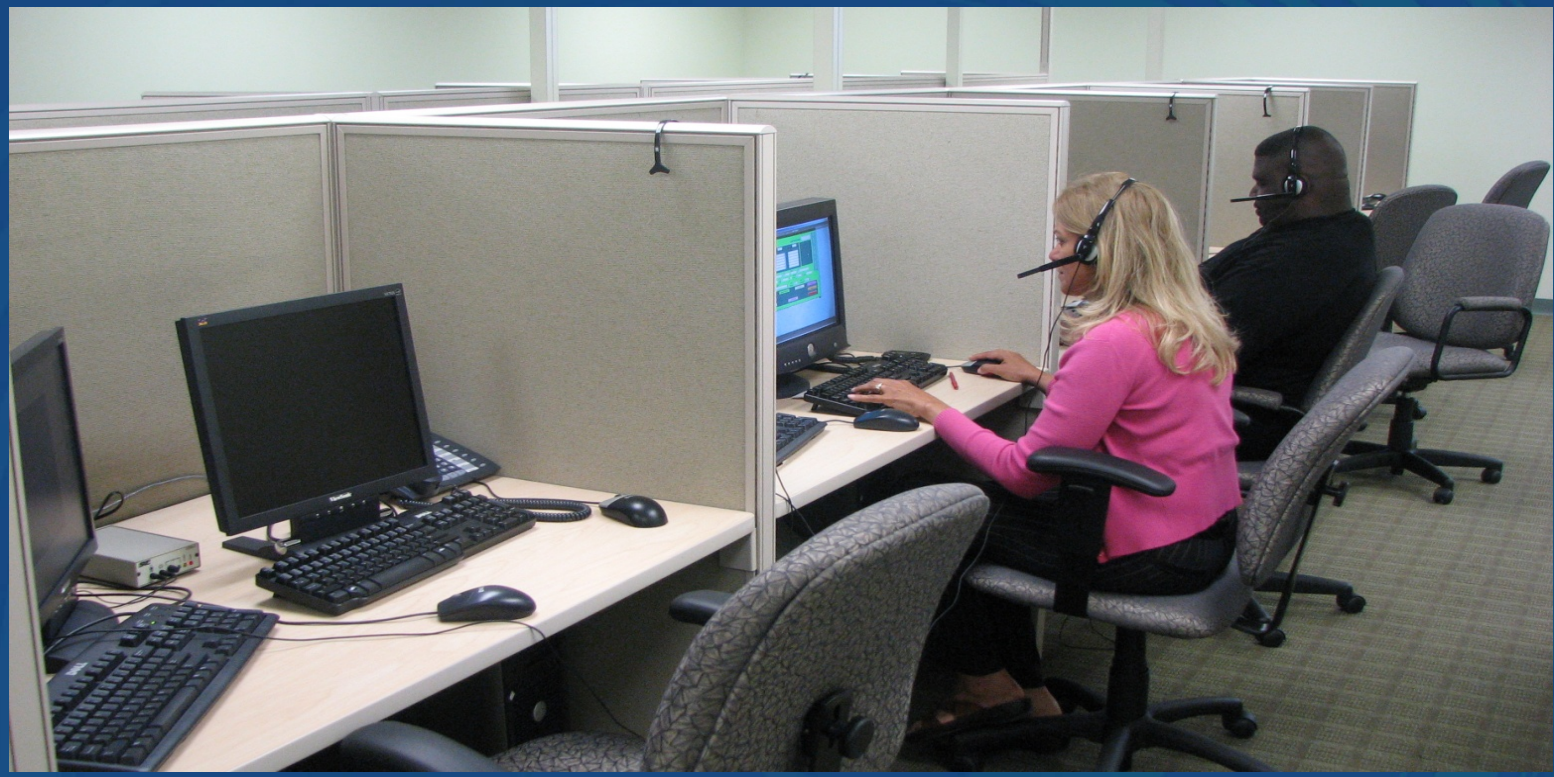
Processing of Vehicles from the Remote Command Center

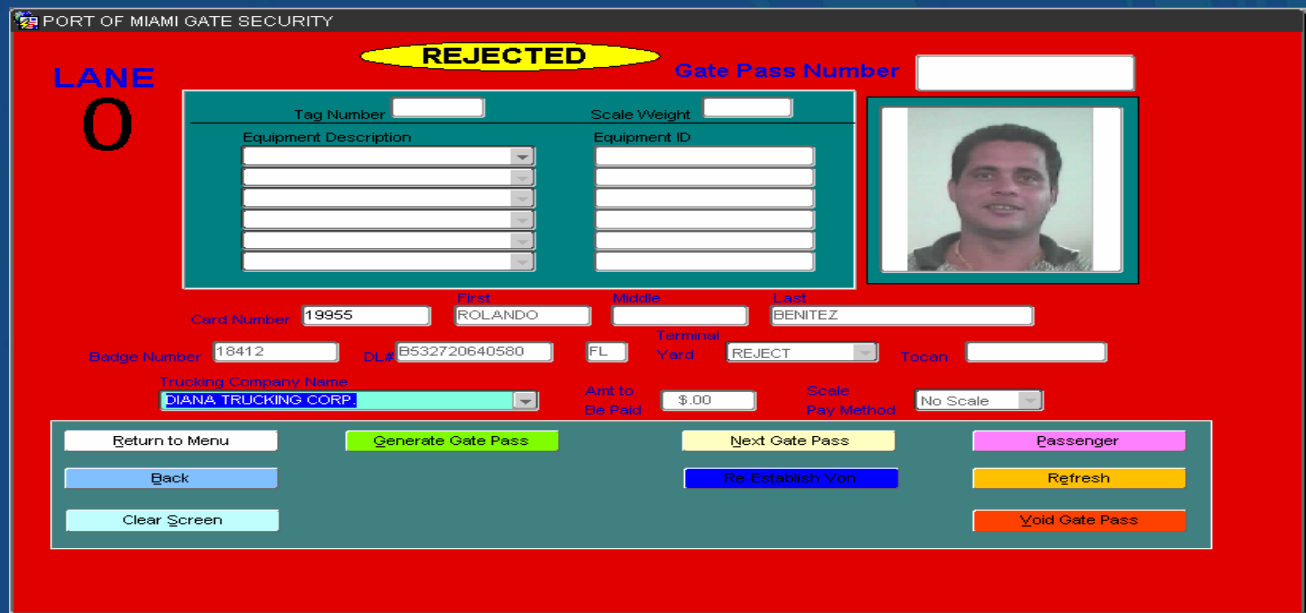


Operator reviews data AFTER driver inputs data. Operator only intervenes when there are exceptions and to complete transaction.

Entry Approved

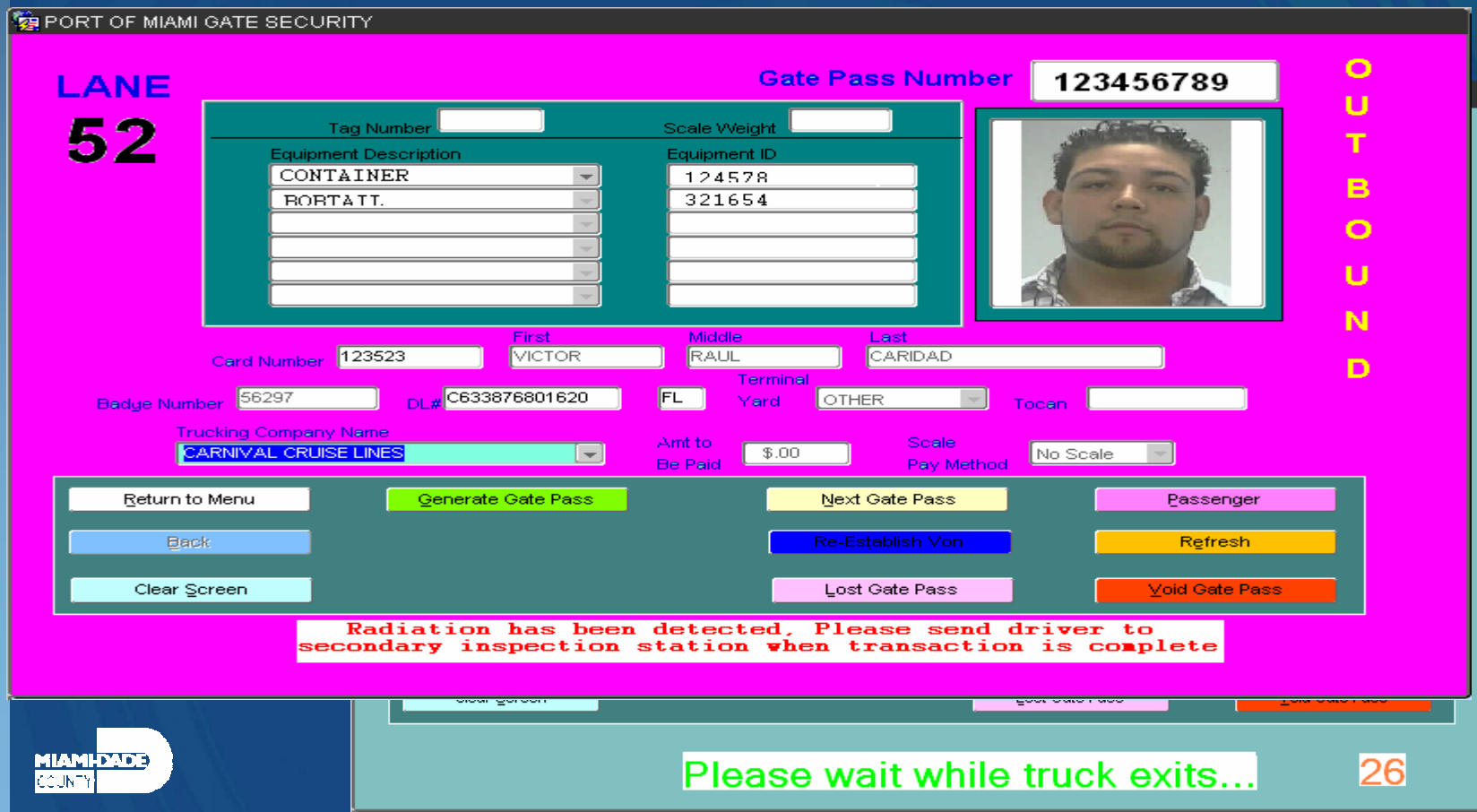
Inbound Transaction

Entry Denied



RADIATION DETECTED

If radiation is detected by the CBP Radiation Portal Monitors, the officer is notified via the screen turning colors and a message stating the occurrence. Driver is given instructions to go to the secondary CBP Inspection Station and the gate arm is lifted. **Gate arms south of the alarmed gate are held for 45 seconds to allow the vehicle to traverse lanes and enter the designated inspection area.**



Entry into Cargo Restricted Area

Conclusions

The Port of Miami Security Gate System has demonstrated exceptional reliability. Applications and Database servers are clustered, load balanced and redundant across multiple sites

Average Transaction Processing Time has been reduced by 50% at the inbound lanes and 80% at the outbound lanes

The system provides secured logs and statistics for both real-time management as well as for traffic load / productivity analysis

All the required Port of Miami business rules (Business Permits, Insurance, Surety Bonds, prepaid scale accounts) are validated, State/Federal regulations are built into the system and enforced

The system is tightly integrated with existing Legacy Applications (Pre-Paid Account Handler, Credentialing, Access Control, Billing, Business Permitting, C.B.P., and Radiation Portal Monitors) to expedite processing times

Thank You

More information contact
Louis A. Noriega
Chief Information Systems