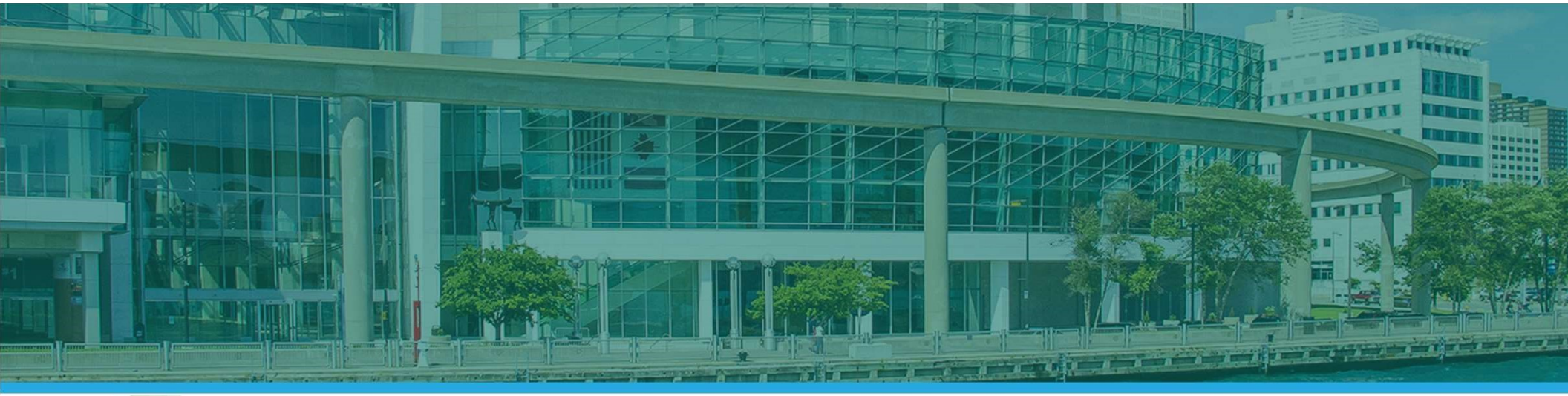

Transforming Mobility for the 21st Century
DETROIT 2018
27th Annual Meeting & Expo
ITS America | June 4-7

ITS AMERICA

FDOT's Truck Parking Availability System (TPAS)

A Multi-Agency Partnership CVO

FDOT TSM&O
Transportation Systems Management & Operations

Fred Heery, Sr., P.E.
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Florida Department of Transportation (FDOT)

Presentation Overview

- Truck Parking Availability System (TPAS)
- Research Projects
- Federal Grants
- TPAS Deployment Locations
- Project Delivery
- Deployment Mechanisms
- Project Schedule
- TPAS Architecture
- Data Dissemination

FDOT's Truck Parking Availability System (TPAS)

TPAS supports

- Federal Motor Carrier Safety Administration (FMCSA) Hours of Service regulation
- Safe and convenient parking options
- Just-in-time delivery
- Advance planning for freight operation
- Reduced truck parking violations
- Electronic monitoring and dissemination of information

First phase deployment at

- Rest Areas
- Weigh Stations
- Welcome Centers

FDOT planning to incorporate private truck parking information in future

Florida International University (FIU) Research

Identify current supply and demand of public parking

- Identified need to “balance” parking use

Assess technology to improve parking management

- Provide advanced notification of parking availability
- Two pilot projects
  - Leon County (in-pavement Sensors)
  - St. Johns County
    (ingress/egress counts w/ detectors)

University of Florida (UF) Research

Evaluation of in-ground sensors to examine their capabilities

- Tested four different vendors

Resulted in FDOT Developmental Specification 660

- Turnover Accuracy – 90%
- Occupancy Accuracy – 95%

Ground-truth data through video logs

Federal Grants

Commercial Vehicle Parking System Project

Location	Florida: I-95 and I-4 Corridors
Award Recipient	Florida Department of Transportation
Innovation	Commercial Vehicle Parking Availability Notification System
Award Fiscal Year	2015
Project Aspect	Operation
Description	This project will provide reliable real-time information about commercial vehicle parking availability to dispatchers and commercial vehicle drivers allowing for educated decisions on parking at rest areas and weigh stations. FDOT has completed the

FDOT Received two (2) federal grants

- Federal AID: $ 1 Million
- FASTLANE: $11 Million

TPAS Deployment Locations

- 52 rest areas (45 in 2019)
- 20 weigh stations
- 3 welcome centers

Number of Truck Parking Spaces Monitored	2,352
Wireless Detection System (WDS)	1,875
Microwave Vehicle Detection System (MVDS)	477

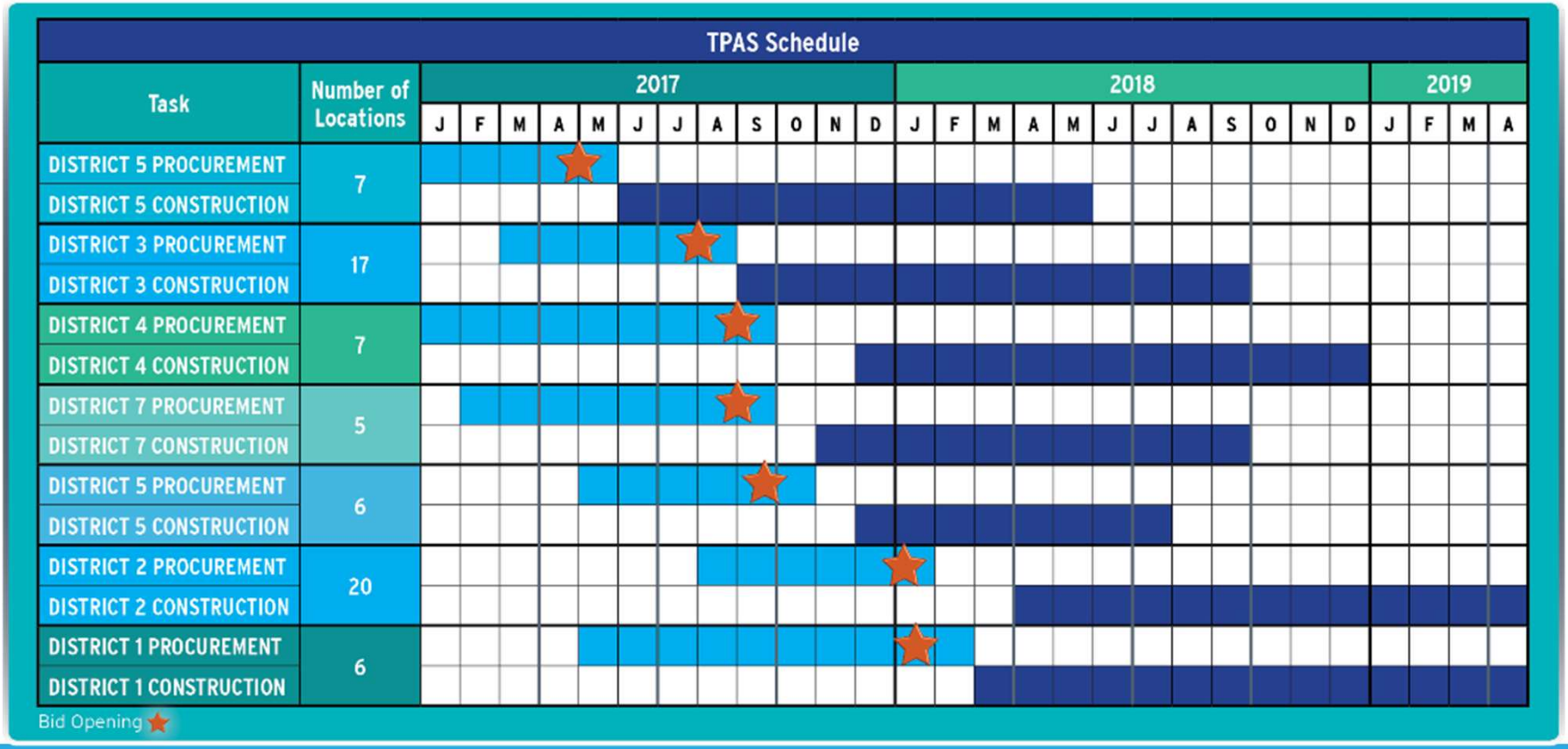
Project Delivery

Three-stage approach to statewide comprehensive truck parking solution

Deployment Mechanism

	Funding	Corridor	Sites	Vendor	Winning Bid Price	Procurement
FDOT District 5 (Phase I)	AID Grant, State Funds	I-4, I-95	5 Rest Areas, 2 Weigh Stations	SENSIT	$1,828,183.00	Adjusted Score Design Build
FDOT District 3	State Funds	I-10	1 Welcome Center, 12 Rest Areas, 4 Weigh Stations	CivicSmart	$4,412,092.00	Low Bid Design Build
FDOT District 4	State Funds	I-95, I-75	5 Rest Areas, 2 Weigh Stations	Sensys	$2,285,285.00	Adjusted Score Design Build
FDOT District 7	State Funds	I-4, I-75	3 Rest Areas, 2 Weigh Stations	SENSIT	$1,947,000.00	Adjusted Score Design Build
FDOT District 5 (Phase II)	FASTLANE Grant, State Funds	I-75	4 Rest Areas, 2 Weigh Stations	Sensys	$1,614,614.00	Low Bid Design Build
FDOT District 2	FASTLANE Grant, State Funds	I-10, I-75, I-95	2 Welcome Centers, 12 Rest Areas, 6 Weigh Stations	CivicSmart	$3,698,384.00	Low Bid Design Build
FDOT District 1	FASTLANE Grant, State Funds	I-4, I-75	4 Rest Areas, 2 Weigh Stations	CivicSmart	$1,441,170.64	Adjusted Score Design Build

Project Schedule



TPAS Architecture

Data collection

- In-ground sensors
- Ingress and egress sensors

Data communications

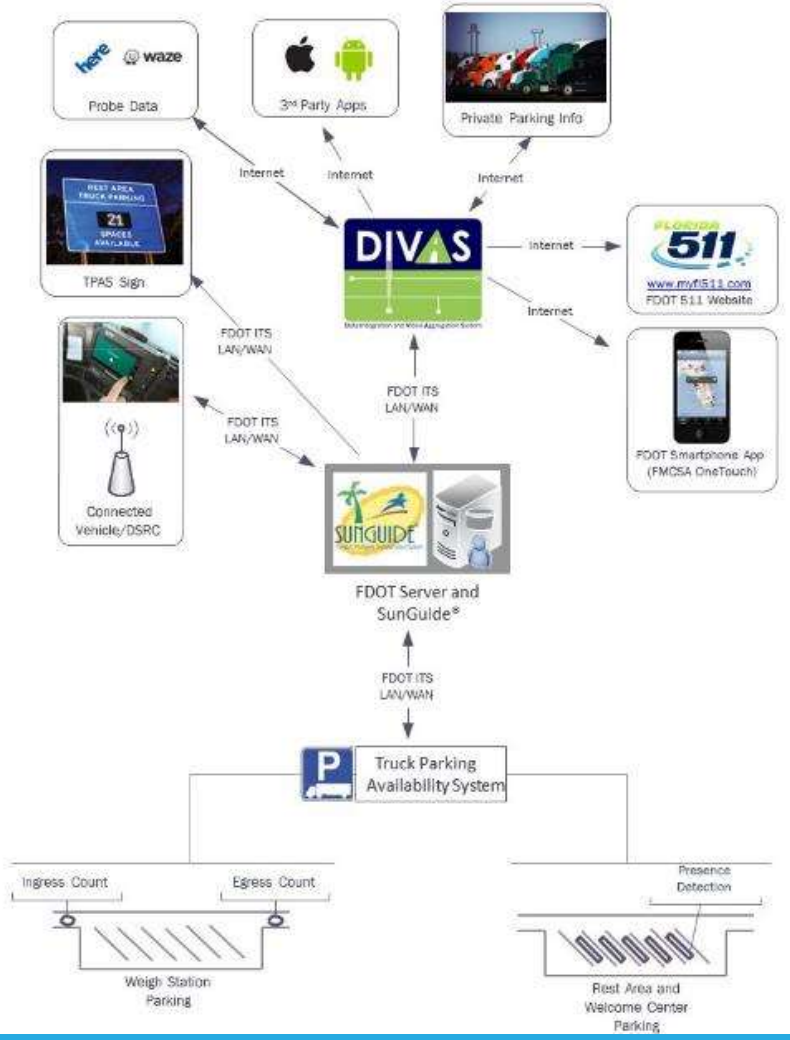
- Existing ITS network

Data collection, processing, and storage

- RTMC using SunGuide® system

Data dissemination

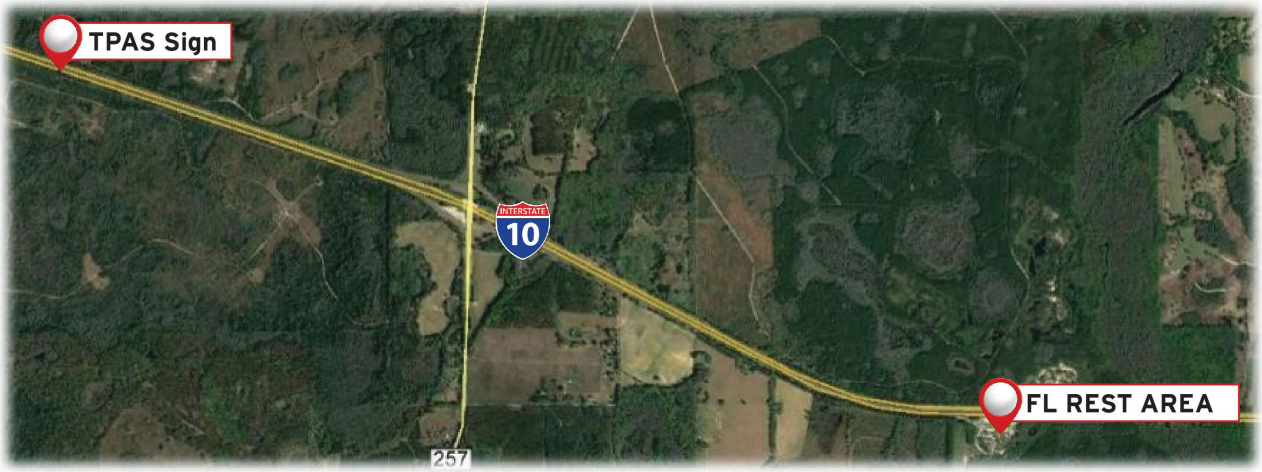
- Embedded roadside Dynamic Message Sign (DMS)
- Connected Vehicle and Dedicated Short Range Communications (DSRC) - Future
- Florida 511
- Data Integration and Video Aggregation System (DIVAS)



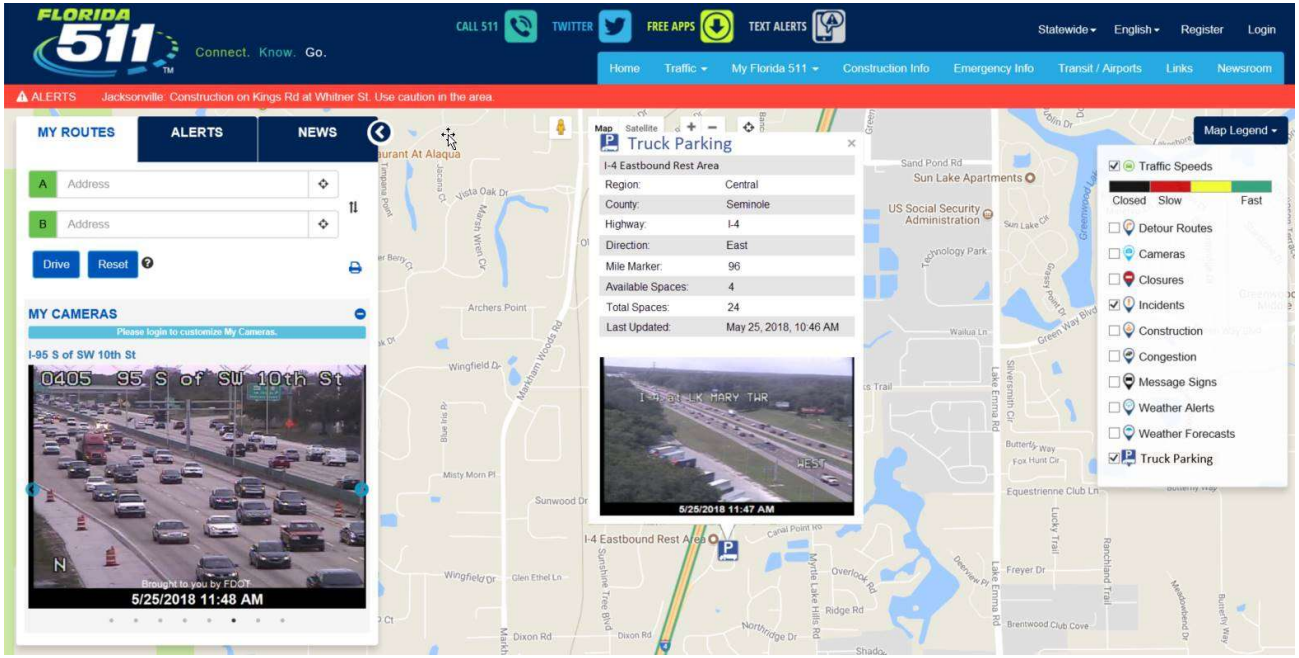
Data Dissemination Using Roadside Signs

Criteria used for roadside signs

- Two to three miles upstream of the parking facility preferably prior to an upstream exit ramp for better decision-making
- Manual of Uniform Traffic Control Devices (MUTCD) compliant
- Near existing ITS communication and power source
- Near an existing CCTV for message verification

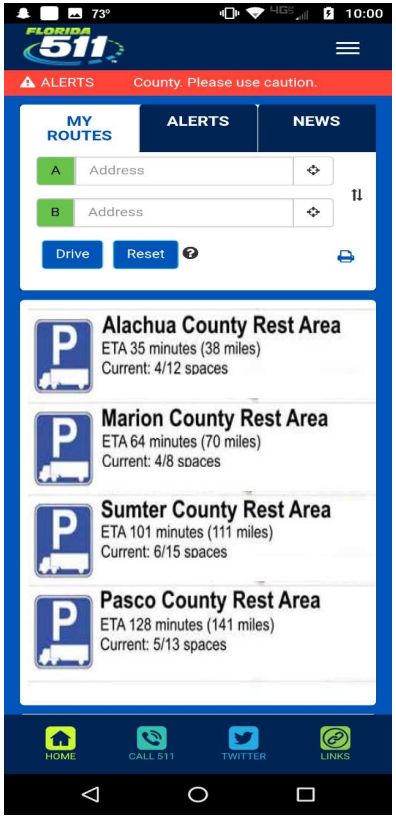


Data Dissemination using FL511



FL511 Website Truck Parking Facility Map View

FL511 Mobile App Truck Parking Facilities List View



Questions?

Thank you!

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