



*UNITED STATES*  
**DEPARTMENT OF TRANSPORTATION**

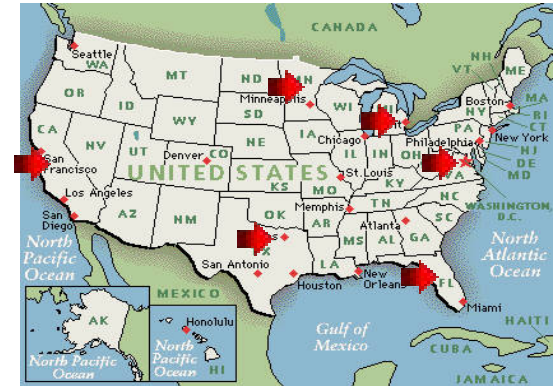
# **Safety Pilot**

Research and Innovative Technology Administration  
National Highway Traffic Safety Administration  
Federal Highway Administration  
Federal Motor Carrier Administration  
Federal Transit Administration

August 2, 2011

# Safety Pilot Sites

- **Driver clinics**
  - Assess user acceptance



**Six Driver Clinic Sites**

- **Large-scale model deployment**
  - Obtain empirical safety data for estimating safety benefits



**One Model Deployment Site**

# Safety Pilot Objectives

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- Generate empirical data for supporting 2013 & 2014 decisions
- Show capability of V2V and V2I applications in a real world operating environment using multiple vehicle types
- Determine driver acceptance of vehicle-based safety warning systems
- Assess options for accelerating the safety benefits through aftermarket and retrofit safety devices
- Extend the performance testing of the DSRC technology
- Collect lots of data and make it available for industry wide use
- Let others leverage the live operating environment



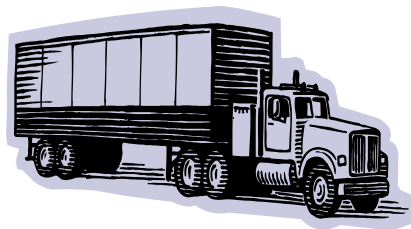
# Model Deployment

## *Obtaining Benefits Data and Operational Experience*

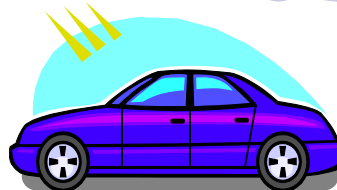
- Major real world implementation starting in 2011 and continuing thru 2013, involving:
  - Over 3000 vehicles
  - Multiple vehicle types
  - Fully integrated systems and aftermarket devices
  - Roadside infrastructure
  - System wide interoperability testing
- Also to test
  - Prototype security mechanisms
  - Device certification processes



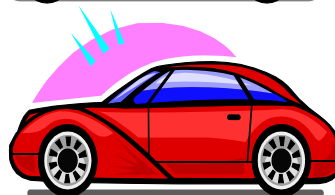
Integrated Vehicles



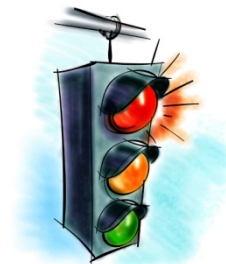
Integrated Trucks



Aftermarket Devices



Here I Am Vehicles



Roadside Infrastructure



# Basic Communication Devices

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- Devices that only transmit Basic Safety Message
  - No driver interface
- Initial procurement resulted in 8 awards
  - 6 vendors made it to acceptance testing
  - No vendors fully complied with the tests
  - Specification was considered by DOT as still weak
  - Updated specification and issued 2<sup>nd</sup> procurement
- 2<sup>nd</sup> procurement resulted in 4 awards
  - Currently underway
- Qualified Products List (QPL) estimated to be established later this year



# Aftermarket Safety Devices

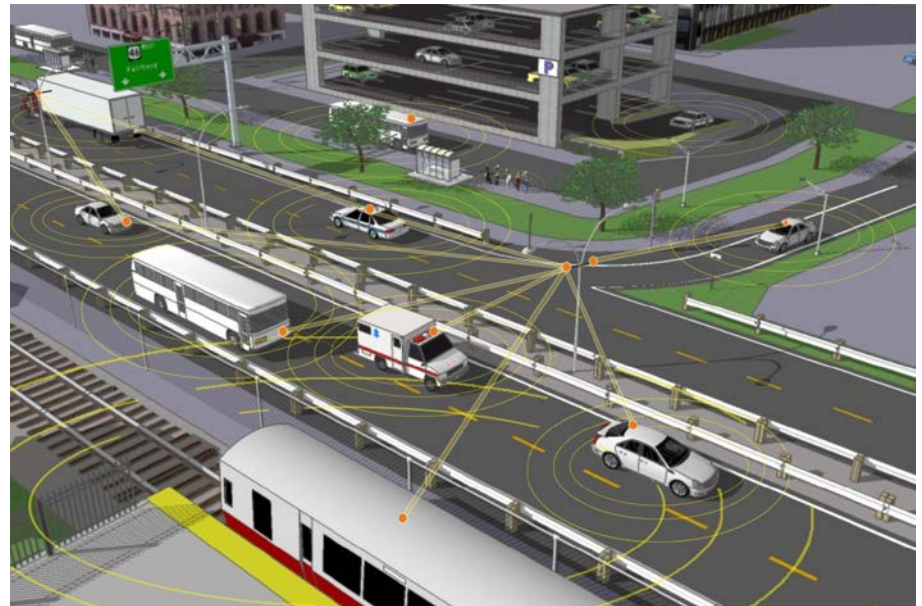
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- Devices that transmit and receive Basic Safety Message
  - Driver interface for safety warnings
  - No integration with vehicle
- 4 vendors currently underway
- Applications include:
  - CICAS-V (red light warning) (V2I)
  - Curve overspeed warning (V2I)
  - Emergency electronic brake light (V2V)
  - Forward collision warning (V2V)
- QPL projected for March 2012
- **Safety devices must comply with NHTSA driver interface criteria before being released to drivers for model deployment**



# Roadside Equipment for Safety

- Transmission and receipt of V2I messages
  - Interfaces with signal controller (at intersections)
  - Supports other dangerous road segment applications
- Applications supported
  - CICAS-V (red light warning)
  - Curve overspeed warning
  - Collection of probe data transmissions
  - Other (tbd)
- 4 vendors currently underway
- QPL projected for January 2012



# ITS Safety Pilot Roadmap

