PREPARING SOLUTIONS FOR A SMART AND CONNECTED WORLD

Andrew Bremer, Deputy Director for Strategic Initiatives and Programs
We can’t build our way out of congestion

Serious injury crashes are on the rise
DATA:
MEASURE TO MANAGE
DATA COLLECTION POINTS

- GPS/Cell Phone Apps
- DSRC Devices
- Traffic Signals
- RWIS/WIMS
- Roadway & Bridge Deck Sensors
TYPES OF DATA

- Traffic Speed/Volumes
- Vehicle Trajectory, Wheel Adhesion
- Weather/Environment
- Vehicle Weight
- Public Safety Vehicle Notification
- Blind Spot/Vehicle Detection
- Advanced Curve Warning
- Roadway Surface Dynamics
- Roadway Surface Temperature
- Work Zone Information
REAL-TIME TRAFFIC MANAGEMENT

- Planning and Asset Management
- Hard Shoulder Running
- Traffic Re-routing
- Emergency Response
- Predictive Traffic Analytics
- Forward Collision Warning/Avoidance
- Adverse Weather Conditions
- Enhanced Traveler Information
- Just-in-time Delivery/Commercial Truck Parking Availability
- Work Zone Identification
TECHNOLOGY AND INFRASTRUCTURE

**Goal:** Develop Interoperability Standards for Ohio

- RSUs
- Telecommunications

**Goal:** Comprehensive Right of Way Policy
Potential Private Sector Involvement

- Data Processing and Storage
- Traffic Data and Information
- Telecommunications
- Product Demonstrations
REGULATION

- Open Road Testing Verification
- Fully Autonomous Vehicle Testing
- Home Rule
SMART MOBILITY IN OHIO: HAPPENING NOW
INITIATIVES

- US 33
- Interstate 90
- Interstate 270
- Interstate 670
- Interstate 80 - Ohio Turnpike
US 33 SMART MOBILITY CORRIDOR

Status: *In Process*
Estimated Finish: Fall 2018
Length: 35 Miles

Features & Benefits:
- Core mass of automotive businesses and research facilities
- Open-road and controlled testing environments
- Fiber optic connectivity with Ohio Supercomputer Center
Anticipated Technology:
- 65 Dedicated Short Range Communications devices (DSRCs)
- 432-count fiber-optic backhaul
- Work Zone DSRCs
- Smart Traffic Signals
- Large sample of connected vehicles
WHY US 33?

US 33 INNOVATION CORRIDOR

Transportation Research Center
NHSTA Vehicle Research Center
Honda of America Manufacturing
Honda North America Performance Mfg Center
Honda R&D
Honda Heritage Center
Honda Trading America
Midwest Logistics Services
United Road

Sanko
Neaton Auto Products
Ryan Logistics
Parker Hannifin
Gosei

Nissin Brakes
CEVA Logistics
NEX Transport
MKC of America
Great Lakes Assemblies

Quality Assistance
Yasakawa Electric
Precision Tools
Ease Logistics
XPO Logistics

Ohio Laser
KNB Tools
KTH Parts Industries
Denyo North America
AutoTool
Surphon Corporation
Velocys
Hidaka USA

TTS/RVC II Logistics
Keihin North America
TotalSim
Crestek
Goken America
Clarion USA
G-NAC
M-Tek

Advanced Technology Products

MARYSVILLE

US 33
Smart Mobility Corridor

DUBLIN

COLUMBUS

OSU Center for Automotive Research
TRC SMART CENTER

Phase I

Completion in 2018
Phase II & III

TRC SMART CENTER

Urban Network

Access Road

High-Speed Test Track

Vehicle Dynamics Area

High-Speed Intersection

Fuel Phase

Highway 2009
Status: In Process
Estimated Finish: Spring 2019
Length: 60 Miles
Features & Benefits:
  o Telecommunications partnership to advance 5G infrastructure with fiber backhaul
  o DSRC RSUs and public service vehicles OBU
  o Additional dynamic message signs, traffic cameras & visibility sensors
OHIO TURNPIKE

Status: In Process
Estimated Finish: 2019
Length: 60 Miles
Features & Benefits:
  o Install RSUs (connected to existing fiber) and on-bard units in public fleet vehicles
  o Test V2I technology
  o Provide data to traffic managers
  o Ideal open road testing site
**I-270 Smart Freight Corridor**

**Status:** *Concept*

**Length:** 24 Miles

**Features & Benefits:**
- Install roadside fiber and RSUs (DSRC)
- Positioned to augment Smart Columbus Initiative
- Promote autonomous testing and truck platooning from Rickenbacker Intermodal facilities to US 33 Smart Mobility Corridor
**I 670 SMARTLANE**

**Status:** *In Process*

**Estimated Finish:** Spring 2019

**Length:** 9 Miles

**Features & Benefits:**
- Reduce traffic congestion
- Less expensive
- Overhead gantries will display posted speed limits and designated lane use
- Shoulder will be strengthened, I-270 interchange reconfigured
QUESTIONS?