Iowa Update

ITS ➔ Traffic Operations

National Rural ITS Conference / ITS Heartland
Branson, MO
August 26, 2014
Tim Simodynes, ITS Engineer
Background

Willy Sorenson
Presentation Goals

For DOTs:
• What Iowa has done that you can learn from

For Consultants:
• What Iowa will be doing that you can help with

For Vendors:
• What products Iowa might want to purchase
Iowa DOT Director

“Our future will be in Information as much as it is today in Infrastructure.”

Focus on Information, Operations & Customer Service

Paul Trombino, III
Office of Traffic Operations

• New Director, John Corbin, PE, PTOE
  • Previously with Wisconsin DOT

• Continued Expansion to many more areas
Office of Traffic Operations

Office Director
John Corbin

~21 Employees

Statewide Emergency Operations
Bonnie Castillo

Traffic Operations Support
Mike Jackson

24-hr Traffic Operations Center

Emergency Transp. Operations

Traveler Information / 511
Sinclair Stolle

Technical Services
Tim Simodynes

Engineering Services

Work Zones

ATMS / TransSuite

Urban/Rural ITS

Traffic Incident Mgmt.

Roadside Traveler Assistance

Traditional “ITS”
Office of Traffic Operations Organizational Concept

Systems Technology & Technical Services
- ITS Deployment
- ITS Maintenance
- Comm Network
- Software Systems
- 511 System

Traffic Operations Center & Response Services

Traffic Incident & Event Management
- TIM Response Plans
- TIM & ETO Training
- Special Event Support
- (Work Zone Mgmt)

Control Room Support
ETO & ISTEC Support

Software Administration
Field Device Maintenance
DMS Maintenance

TIM Program Support (On-Call)
Fiber Design (On-Call)
Traffic Operations Engineering Full Service (On-Call)
Traffic Operations Program Areas

- Active Traffic Management & Integrated Corridor Management (ATM/ICM)
- Road Weather Management
- Traffic Incident Management/Emergency Traffic Operations (TIM/E TO)
- Work Zone and Planned Event Management

Traffic Operations Center
Traffic Incident Management/ Emergency Traffic Operations (TIM/ETO)

- Regional TIM Plans
- Electronic Incident Notifications
- ETO Plan, Training, & Exercises
- TIM On-Call Contracts
- Highway Helper RFP Pending
Active Traffic Management & Integrated Corridor Management (ATM/ICM)

- Ramp Metering and Managed Lanes Studies - Council Bluffs & Des Moines
- Adaptive Signal System Deployment Program (Office of Traffic & Safety)
Planned Event Management
Road Weather Management

• 511 Winter Road Reporting in coordination with Maintenance staff

• Plow Cams available to public
Connected and Automated Vehicles

- Supporting Automated Vehicle efforts (UoI, InTrans)
- Convening stakeholder group to develop Iowa’s Connected Vehicle Strategy
Iowa Inventory
9 “Metro” Areas (over 50,000)
ITS Inventory
300+ Cameras
ITS Inventory
Dynamic Message Signs

65 Overhead; 48 Side-Mount;
86 Portable; 6 Small Color
DMS
ITS Inventory
Dynamic Message Signs

- Overhead DMS
  - Currently Skyline; previously Daktronics & Skyline
- Side-Mount DMS
  - In process of designing larger sign
  - previously Skyline & Addco
- Portable DMS
  - Need to select a new provider
  - Previously Addco & Ver-Mac
Resources: Traffic Sensors
Wrong Way Detection

• US 30 in Vicinity of Ames
• 20 Wavetronix HD Sensors on mainline
• Verify with Camera Recordings
• Monitor and Study only at this point

• Way too many False Positives
Wrong Way Vehicle
3rd Party Probe Data

- Iowa has INRIX Traffic Data and Analytics

- Still working on
  - Full integration into TransSuite
  - Real-time information and alerts for TOC
  - Analysis of Work Zones
  - Identification of DMS needs
  - Traffic incident trends
  - Historical analysis of winter event recovery
Intelligent Work Zones on Traffic Critical Projects

• TOC Monitoring with Traffic Sensors and Cameras
• Automated Queue Detection and Warning Systems with DMS
• Traffic Signal Preemptions
2014 IWZ Locations
Highway Advisory Radio (HAR)

10 Permanent  2 Portable
Iowa Statewide Traffic Operations Center (TOC)

New (Draft) Video Recording Policy

• Outsourced 2013
• Moving Ames-to-Ankeny
Intersection Conflict Warning Systems, ICWS

- 5 Installed Now
- 6th Will include new design to include warning mainline traffic
Winter Variable Speed Limit Pilot Project

• Based on Weather and Surface Friction Sensors

• I-35, One direction

• Portable DMS for advisory signs
What's new with 511?

- Redesigned our mobile app (switched vendors) in May 2014
- Over 100,000 downloads
Launched a 511 Trucker Page

- Includes things like restriction-only events, weigh scales, Towing Prohibited and rest areas (coming this fall).
- Restriction-only events are no longer on general 511 website
- Special Personalized Alerts for truckers.
- Site: [http://tr.511ia.org](http://tr.511ia.org)
Trucker Page - Restrictions

- Restriction-Only Events (no longer on general 511 page)

This... (originally on General 511 Page)

Becomes this... on the Trucker Page

And this... on the General 511 Page
Truck Parking Cameras

- Pilot project on I-35 – Fall 2013
- Installed cameras:
  - 9 rest area cameras
  - 5 parking-only cameras
- Multiple views per camera – still images
- Available on all website versions and mobile app
To be launched winter 2014-2015
Citizen Reporting - Tell us more....

- Integrates citizen reporting information on winter road conditions into the 511 system.
- Enables members of the public to submit winter driving conditions for publication on the 511 system.
To be launched in Oct/Nov

- Complete update of our Full-Featured 511 website.
On-Call Consultants

• Fall 2012, 3 contracts (<$100,000/yr)
• 2013 Traffic Incident Management, 4 contracts
• 2014 Fiber & ITS Design, 3 contracts
• 2014 Full-Service Traffic Operations Support, 5 contracts

All contracts for 3-years.
Upcoming Equipment Purchases

• Portable DMS
• Side-mount DMS
• Arterial DMS

www.iowadot.gov/purchasing/
Questions

Tim Simodynes, P.E.
ITS Engineer
Office of Traffic Operations

tim.simodynes@dot.iowa.gov
515.239.1606