Applying Integrated Corridor Management to the Rural COATS Region

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Overview

• ICM overview
• COATS
• Study area
• Vision and Focus
• Scenarios
• Present and Envisioned Operations
• Goals and Approach
• Completed/Upcoming activities
Integrated Corridor Management

• Approach which addresses the growing challenge of managing congestion in urban areas by optimizing transportation corridor infrastructure through the proactive, integrated and multimodal management and operation of existing assets by transportation agencies
Federal ICM Initiative

- Current Status: Eight ICM Pioneer Sites Selected to Partner with USDOT in Its ICM Initiative:
  - Dallas, Texas
  - Houston, Texas
  - Minneapolis, Minnesota
  - Montgomery County, Maryland
  - Oakland, California
  - San Antonio, Texas
  - San Diego, California
  - Seattle, Washington
Why Rural ICM?

- Primary focus of ICM has been urban
  - Logical as congestion is prominent and alternatives are available
- Rural areas have unique events which can impact the system beyond a local scope
  - Focus on coordination rather than managing the incident
- To date, no extensive examination of application to rural areas
  - Limited planning activities
    - Tri-State Advanced Traveler Information Systems Initiative
    - North/West Passage
  - No field deployment has occurred
- Need remains to take rural ICM from planning to deployment
Rural Challenges

- Geographic scope
  - Long distances between lodging and services
  - Limited communication networks
  - Ample (and growing) ITS deployments

- Mixed user groups – different info needs
  - Local residents
  - Freight movement
  - Tourism

- Lack of alternative/connecting routes
  - Two alternative and two connecting for this project
  - Other locales may not have that luxury
COATS

- California/ Oregon Advanced Transportation Systems
- Bi-state, multi-jurisdictional ITS planning, demonstration and evaluation effort
- Begun in 1998
- Identify transportation and information needs
- Determine ITS solutions
Why ICM in the COATS Region?

- Existing relationships between CA and OR
  - opportunity to utilize and enhance
- History of innovative ITS projects
- Significant number of existing ITS deployments to utilize
- Existing viable alternative route – freight use
Study Area/Routes

- I-5 and US97/OR58 between Eugene OR and Weed CA
- Roughly parallel routes
  - Nearly equidistant
    - I-5 – 244 mi
    - US 97/OR 58 – 243 mi
  - Connecting routes between them
    - OR 140
- Host to ITS deployments
- Ten mtn. passes between routes
  - 7 on I-5, 1 on OR 58, 2 on US 97
COATS ICM Vision

• Provide for shifts between routes when confronted with restrictive events, incidents or emergencies
• Allow for a safer travel to destinations in a reasonable and predictable time
• Facilitate:
  • Provision of timely, accurate and useful traveler information
  • Cooperation between agencies.
Focus

- Movement between major regional transportation centers
  - Seattle/Portland – Central Valley/So. California
- Goods movement corridors
  - I-5 – heavily trafficked freight corridor
  - US 97/OR 58 – increasing freight usage
- Traffic management
  - Allow movement to continue via alternative routes
- Traveler information
  - What is relevant?
  - How to disseminate?
- Incident management
  - What constitutes an event that the ICM can assist in addressing?
Scenarios

- Potential for numerous scenarios where agency coordination is necessary
  - Weather conditions
    - Snowflake group
  - Construction – short and long term
  - Wildfires
  - Seasonal peaks – summer and winter
    - Tourism area
  - Accidents
Present Operations

• Winter operations data flows for Siskiyou Pass
**Envisioned ICM**

- Acts as a central data server to collect and disseminate information (clearinghouse)

**Central Point TOC**
**Redding TMC**
**Salem TOC**

**CHP**
**Other Traffic Management Agencies**
**COATS Region Integrated Corridor Management System**
**Local Police**
**Local Fire**
**California Trucking Association**
**West Coast Corridor Coalition**

Other Traffic Management Agencies

**OSP**
Goals

• **Serve as proof of concept**
  – Move beyond planning realm and achieve implementation

• **Identify and address issues unique to rural**
  – Geographical range
  – Jurisdictional
  – Communications
  – What info pertinent/applicable to travelers
    • Strategies to get this info out
Approach

• **Follow FHWA’s ICM systems program plan**
  – Build upon previous work in the COATS region
    • Tri-State Advanced Traveler Information Systems project
  – Small pieces first, build upon successes

• **Multifaceted approach to address Institutional, Operational and Technical issues**
  – Identify stakeholders
  – Inventory existing deployments
  – Determine existing barriers and address
  – Conduct field implementation
Progress to Date

• ICM Work Plan
  – Laid out the steps to be taken in the work

• Data Collection
  – Inventory of existing and planned ITS elements (completed)
  – Site visits/documentation of routes
    • Eliminated one potential connector – poor geometrics

• Draft Vision
  – Outlined potential scenarios
  – Functions of ICM to address scenario
Upcoming Work

- Concept of Operations
- Gap Analysis
- Data collection – travel patterns
- Operations and systems development
- Lab/field testing
- Deployment
Questions

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