Fast Track Deployment of ITS Designs

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Seaside, Oregon

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Fast Track Deployment of ITS

• Case Study Overview
• Issues & Solutions
• Lessons Learned
Context for the Case Studies

Alaskan Way Viaduct

- ~110,000 VPD, about 2.1 miles in length
- Risk of failure from earthquakes. AWV project started after 2001 Nisqually Earthquake
- Improve safety and mobility
- 2010 begin construction
- 2010 construction of $4 to $7 Billion Multi-year project

AWV project website
Case Study Goals

- Real time management of traffic operations
- Build multi-million dollar ITS system before Alaskan Way Viaduct construction (2010)
- Real time information to the public
- Greater opportunity to manage arterial congestion

Corridor ITS

Roadway Subsystem

Public

Traffic Conditions

Management Subsystems

City of Seattle TMC

Management Subsystems

Traffic Data and Video

WSDOT TMC

Management Subsystems

Traffic Data and Video

Other Agencies
Case Study Corridors

Seattle Department of Transportation (SDOT)
- City of Seattle ROW
- City arterial streets

Washington State Department of Transportation (WSDOT)
- On State Route 99 (State ROW)
- Facilities maintained by City of Seattle
## Case Study Overview

<table>
<thead>
<tr>
<th>Existing Infrastructure</th>
<th>Seattle (Arterials)</th>
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<tbody>
<tr>
<td>New Cabinets</td>
<td>48</td>
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<tr>
<td>New DMS</td>
<td>12</td>
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<tr>
<td>CCTV Cameras</td>
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<tr>
<td>License Plate Reader</td>
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<tr>
<td>Existing Communication by SDOT DoIT</td>
<td>Fiber and Copper</td>
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<td>Contract Administration</td>
<td>City</td>
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<tr>
<td>Design Timeframe</td>
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*Alaskan Way Viaduct*
## Case Study Overview

<table>
<thead>
<tr>
<th>Existing Infrastructure</th>
<th>WSDOT (SR 99)</th>
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Fast Track Deployment of ITS

• Case Study Overview (Why fast track?)

• Issues & Solutions

• Lessons Learned
Issues & Solutions

**Issue**
- Use of photos in design
- Integration into plans
- Increased field work/organization

**Solution**
- Improved confirmation of ex. field conditions
- Improved design reviews
Issues & Solutions

Issue

• Work on/around signal cabinets
• Close proximity to ex. pedestrian facilities
• Meeting ADA compliance

Solution

• Added pedestrian ramps
• Added tactile ramps
• Modified / Added pedestrian push buttons
Issues & Solutions

Issue

• Integrated system components
• Future Transit Signal Priority

Solution

• Proprietary Item approval
  CCTV, Cabinets, Controllers
Issues & Solutions

Issue

• Complete Construction by the end of 2009
• Long lead items
• Not enough time for contractor fabrication

Solution

• Agency provided long lead items
  DMS, DMS poles, Cabinets, Controllers
• Long Lead (Fabrication & Testing)
Issues & Solutions

Issue

• Minimize impact to existing infrastructure
• Add advanced & system detection
• Overall lower installation cost
Solution

Sensys wireless detection system

From Sensys Networks – Baltimore, MD installation
Issues & Solutions

Issue

• Provide arterial travel time data
• Install on existing infrastructure

Solution

• License Plate Reader
  PIPS
Issues & Solutions

Issue
  • Communicate travel times to the public
  • Provide the public advanced routing options

Solution
  • Arterial Digital Message Board (DMS)
    Mid block locations
    Within ROW
    Analyzed locations close to signalized intersections
Fast Track Deployment of ITS

• Case Study Overview
• Issues & Solutions
• Lessons Learned
Lessons Learned

• Anticipate significant field work deploying into existing infrastructure (photos)
• A Datacompliance
• Clarity around design criteria (Limitations on use of existing infrastructure)
• Acceptance of new technology
3 Steps to a Fast-Tracked Project

- Start with a well defined strategic plan for ITS deployment
- Place the BIG rocks first
- Remain flexible – understand and adapt to new technology
Thank You

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Questions?