

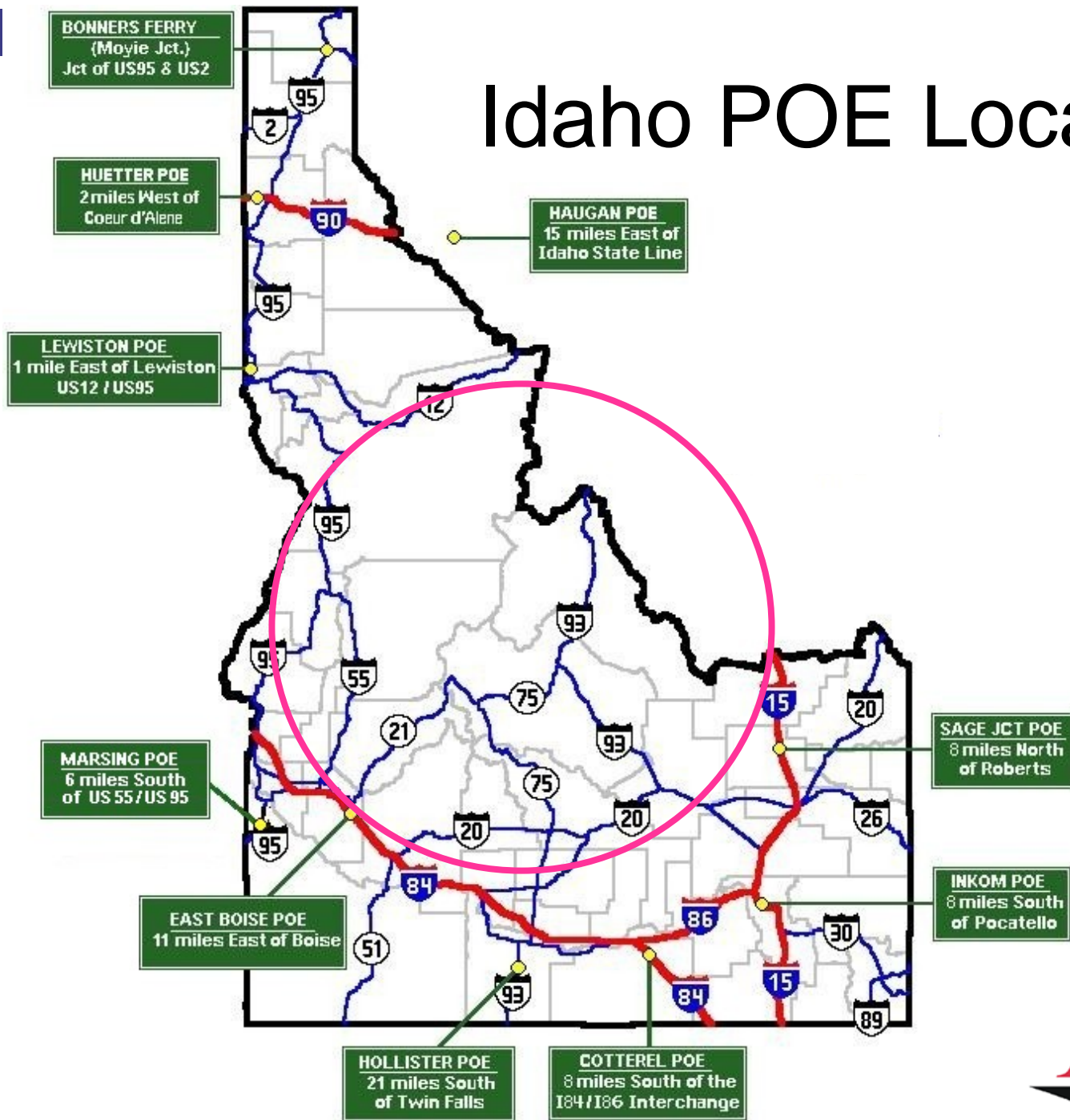


The Idaho Smart Roadside System

Efficient, Service-Oriented Weight Enforcement

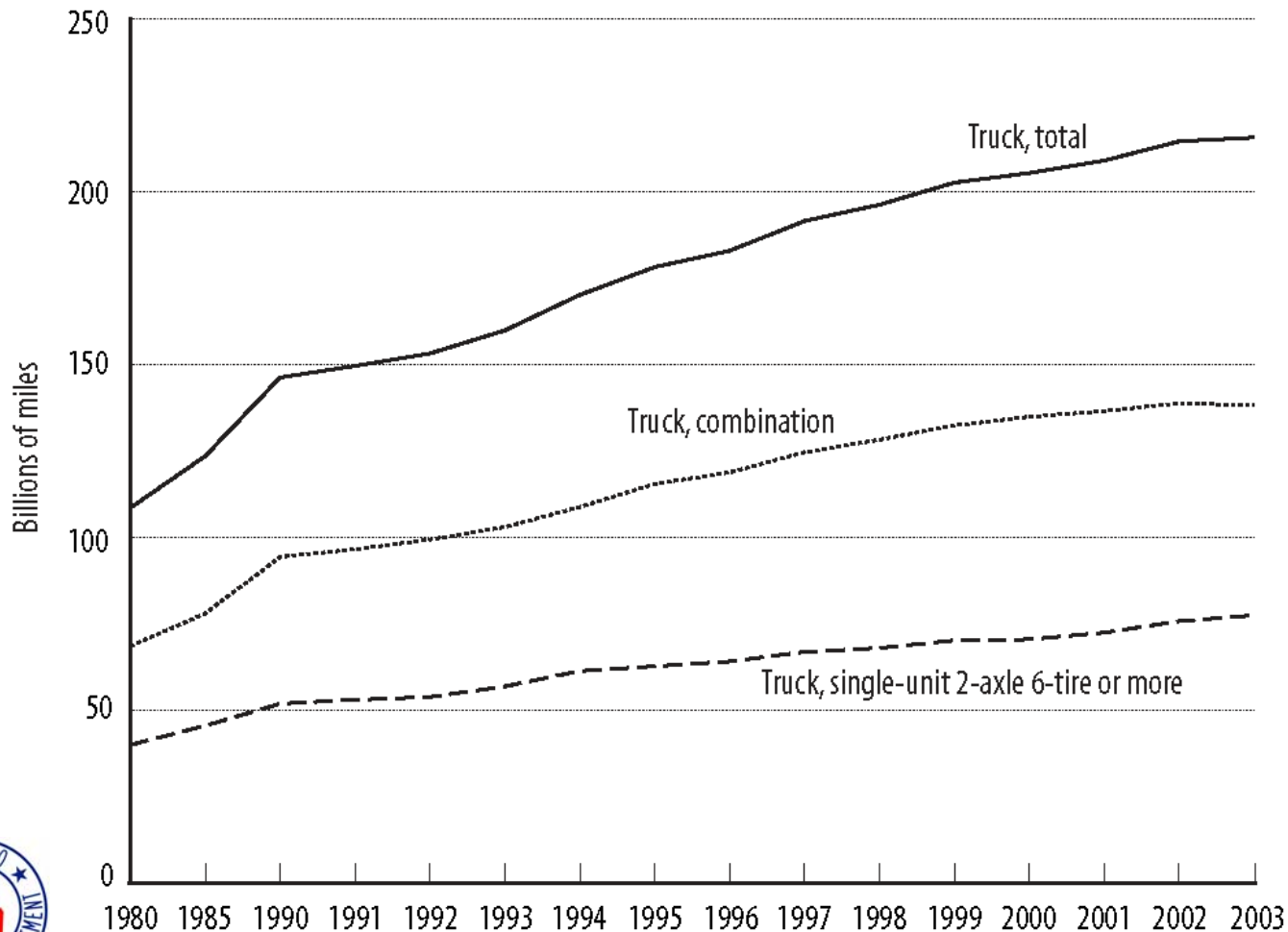
R. T. Allemeier (Iteris, Inc.), A. J. Frew (ITD), R. Rodriguez (ITD),
T. T. Hoffman (Iteris, Inc.)

Idaho POE Locations



Commercial Vehicle Operations Continually Growing

Truck Vehicle-Miles Traveled on U.S. Highways: 1980-2003*



*Source: Freight in America
A New National Picture
USDOT – January 2006



The Problem

- Large geographical areas unprotected
- High costs of fixed facilities
 - Minimally \$5M with annual recurring costs of \$900K
- Continued growth in trucking – as the economy grows trucking follows



Finding a Solution

- Bring together public sector enforcement and motor carriers to assess ISRS needs.
- Assess available technologies.
- Create deployment scenarios based upon prioritized output of needs assessment.



Idaho – Basic Principle

- ISRS should provide more than enforcement capabilities. The final deployed solution should also provide value added features for the safety and the motor carrier community.



Type of ISRS Information Capture

Question	Agreed	
	Carriers	State
Type (classification) of Vehicle	100%	100%
Weight of Vehicle	100%	100%
Number of Axles	100%	100%
Speed of Vehicle	50%	50%
Carrier / Vehicle Identification	100%	100%
Date and Time Stamp	75%	100%
Image of Vehicle	75%	100%
Infrared Images of Brakes	50%	25%
Transponder ID	100%	100%
Radiation Readings	100%	0%
Chemical Readings	100%	0%



Locating ISRS

Question	Agreed	
	Carriers	State
Proximity to state borders	100%	100%
Truck traffic corridors	100%	100%
Proximity to adjacent highways / interstates	50%	100%



ISRS Data Use

Question	Agreed	
	Carriers	State
Transportation Planning	75%	50%
Enforcement Activities (Weight, Speed, etc.)	25%	100%
Trip Planning	25%	25%
Commercial Vehicle Route Planning	25%	50%
Vehicle / Driver Monitoring	50%	100%
Automated Credentialing	100%	100%
Real-Time Driver Communication (i.e. View weight & speed on a lighted sign.)	100%	50%



Carrier Comments

- Concerned about use of ISRS for speed, weight, or credentials enforcement.
- Carriers expressed high degree of interest in automated permit renewal.
- Some carriers expressed interest in having ISRS located where it can help level the playing field.



Synthesized ISRS Capabilities

- Size and weight enforcement
- Credentials enforcement
- Speed & safety enforcement
- Driver feedback
- Road network security / public safety

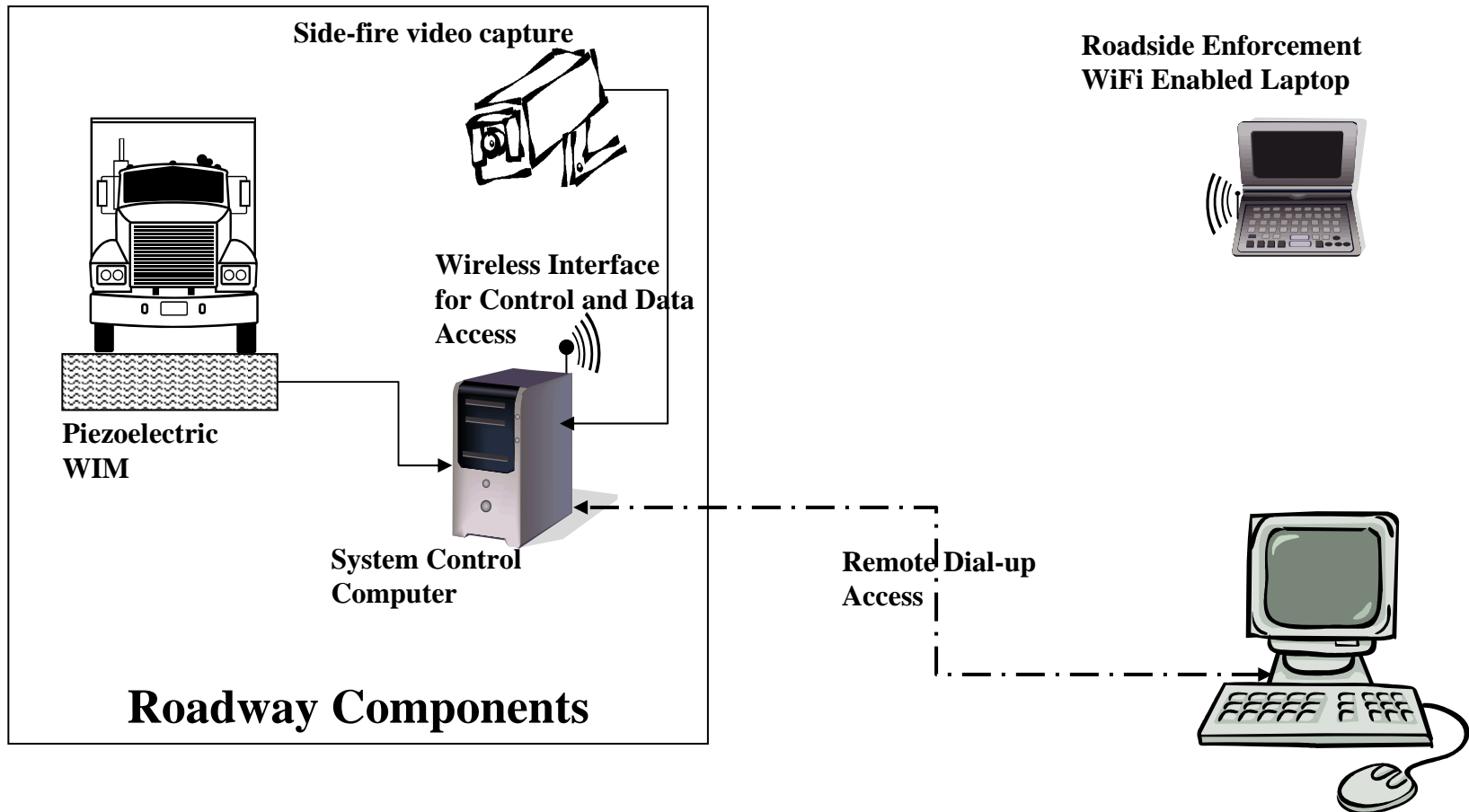


ISRS Configurations

ISRS Capabilities	Prototype Configurations			
	<u>Number 1</u> Basic Classification	<u>Number 2</u> Enhanced Classification	<u>Number 3</u> Road Network Security 1	<u>Number 4</u> Road Network Security 2
Size & Weight Enforcement	✓	✓	✓	✓
	Except for height detection.			
Credentials Enforcement	✓	✓	✓	✓
Speed & Safety Enforcement	✓	✓	✓	✓
	Except brake checking.			
Driver Feedback Information	x	x	✓	✓
Road Network Security / Public Safety	x	x	x	✓



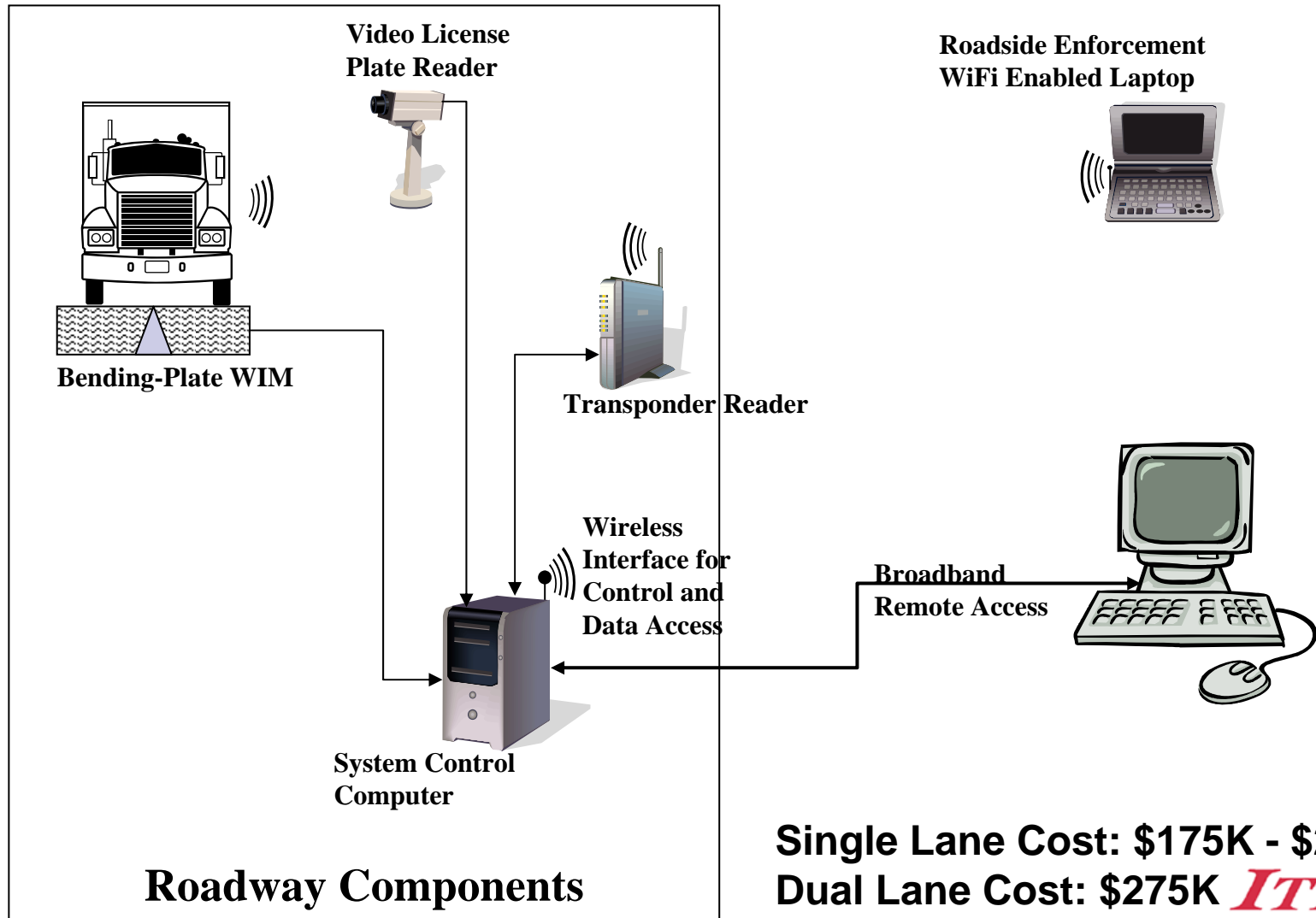
Configuration 1



Single Lane Cost: \$75K - \$170K



Configuration 2

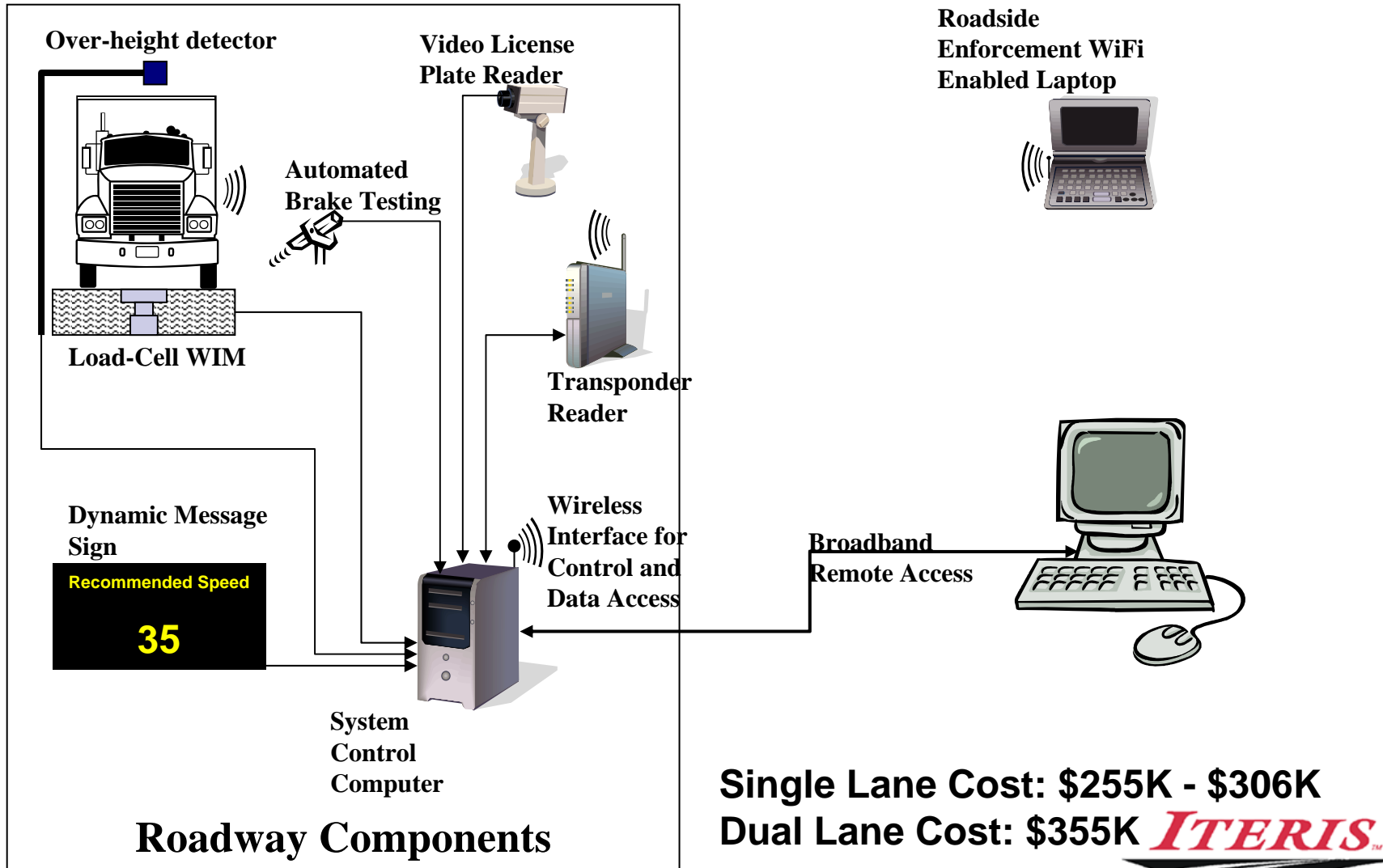


Single Lane Cost: \$175K - \$256K

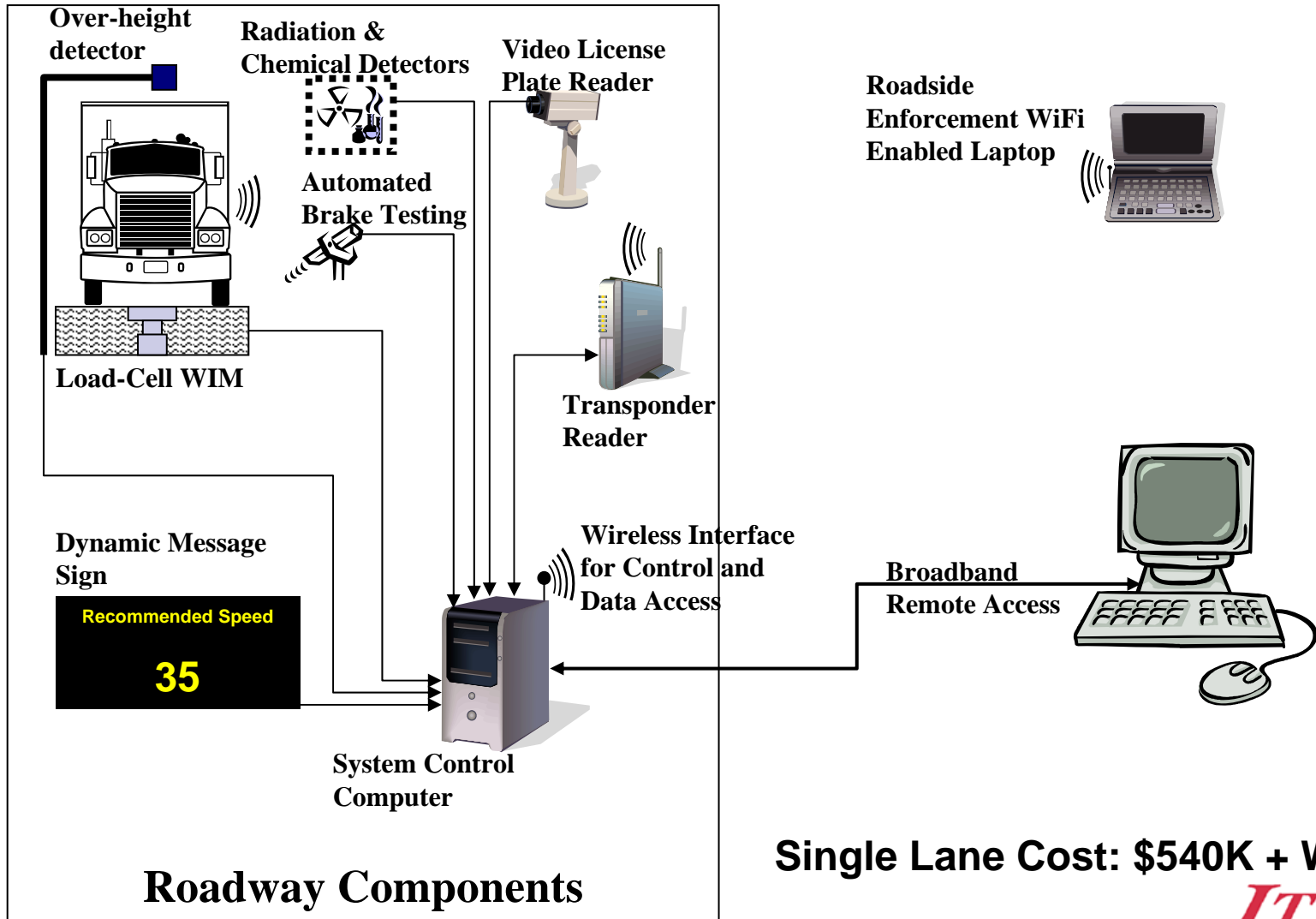
Dual Lane Cost: \$275K **ITERIS™**



Configuration 3



Configuration 4



Single Lane Cost: \$540K + WIM



Recommendations

1. Deploy a prototype ISRS in a test-bed configuration
2. Establish a cross-organizational team for oversight of ISRS
3. Maintain active participation in FMCSA Expanded CVISN Smart Roadside Working Group



Next Steps

