ACCOMMODATING LAW ENFORCEMENT IN WORK ZONES

2002 Roadway Work Zone Safety Conference and Exhibition

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Texas Transportation Institute

Transportation Operations Group

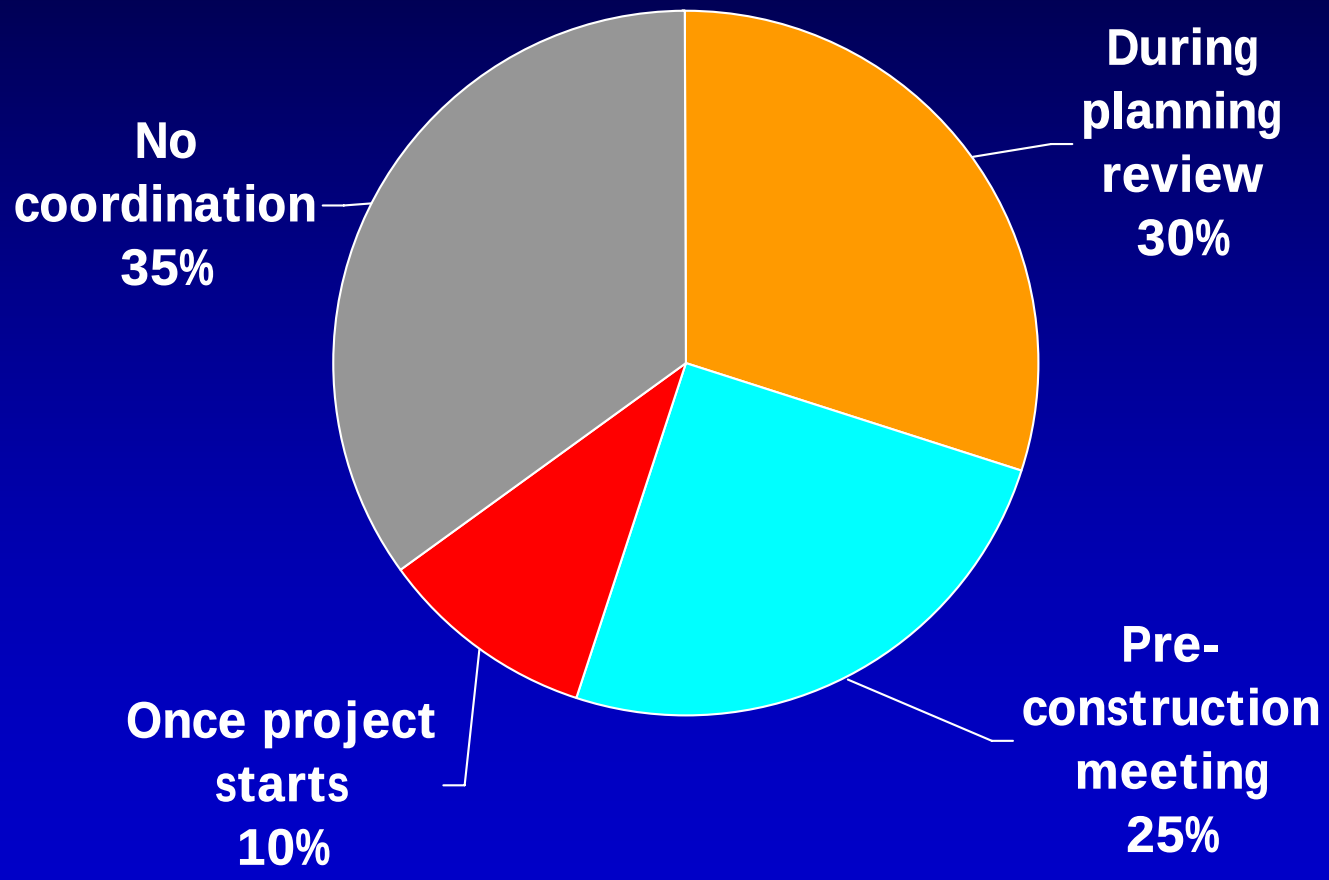
The Problem….

- **Enforcement areas often eliminated**
- **Legislation hampers enforcement efforts**

What Can Be Done?

- Better DOT/enforcement coordination during planning/design/construction
- Better use of technologies
- Better enforcement-friendly designs

When Does Coordination Begin?



Innovative Arrangements

- **NJ State Police Construction Unit**
  - *OSHA-certified officers*
  - *Traffic control plan training*

- **South Dakota DOTCOP**
  - *Officers hired as DOT employees*
  - *Special DOT vehicles*
  - *Authority limited to work zones*

Supporting Technologies

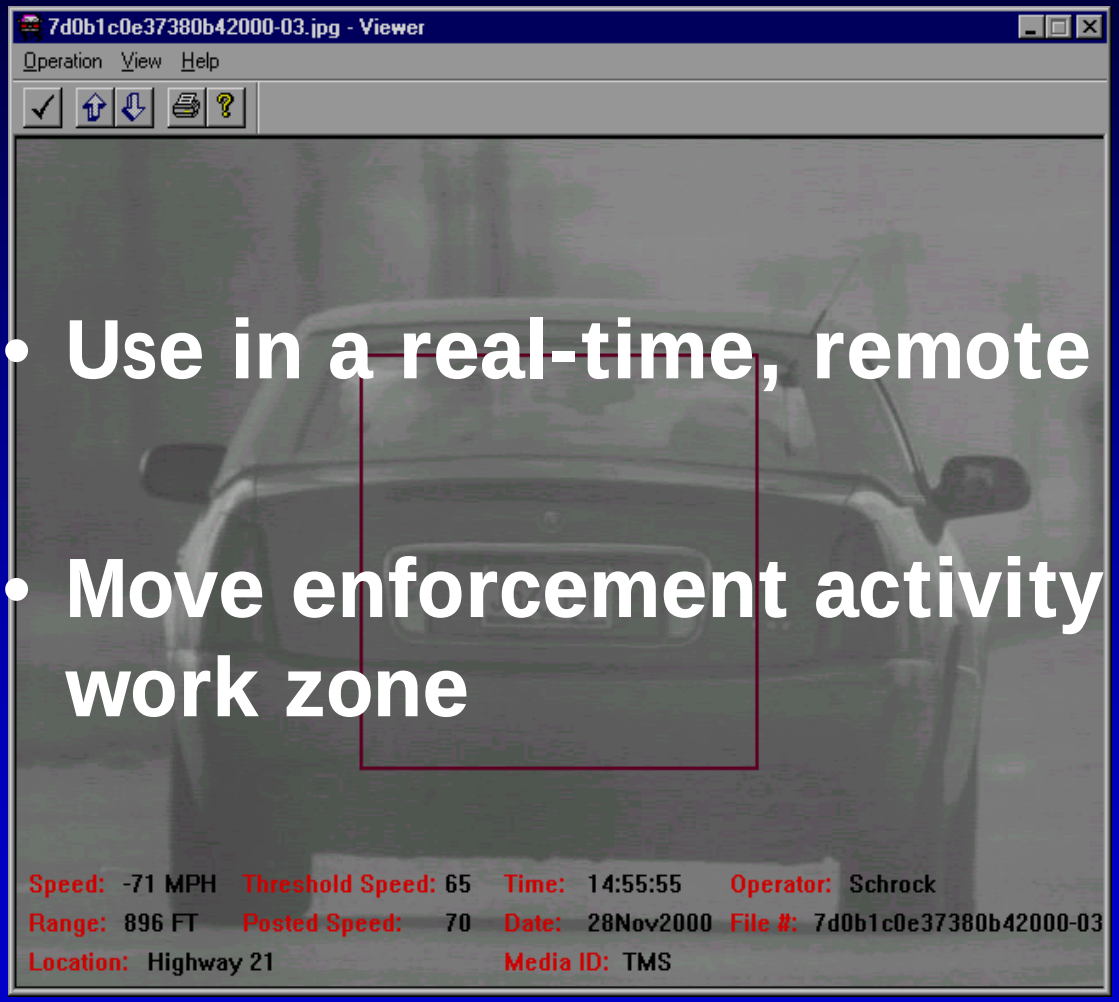
- Providing "real-time" information
- Automated speed enforcement (ASE)

Simple "Real-Time" Signing

Standard ASE Technologies

- High DOT/contractor/enforcement interest
- Requires legislative changes to transportation code
- Significant public/political opposition to ASE systems in the U.S.

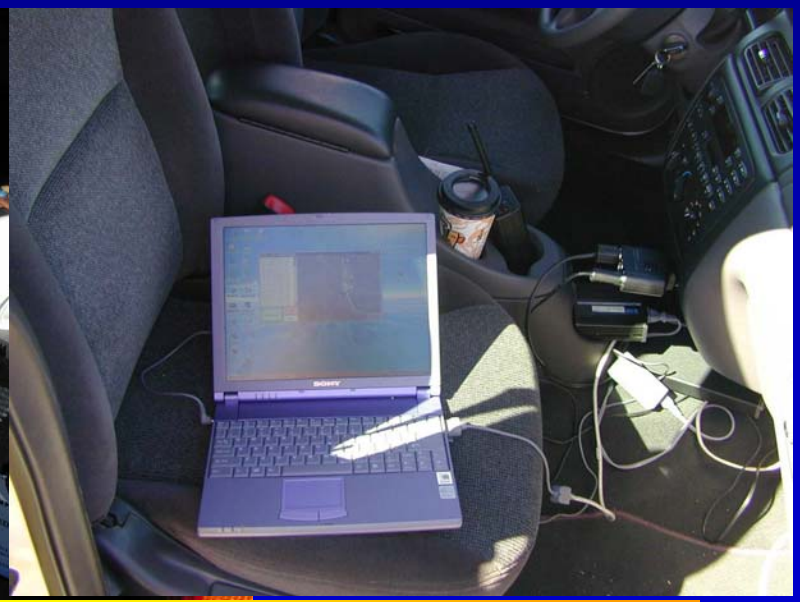
Modified ASE?



- Use in a real-time, remote mode
- Move enforcement activity outside of work zone

Technically Feasible?

- 85-88% of vehicles correctly identified 0.5 to 1.5 miles downstream
- Wireless transmission of up to two images per minute



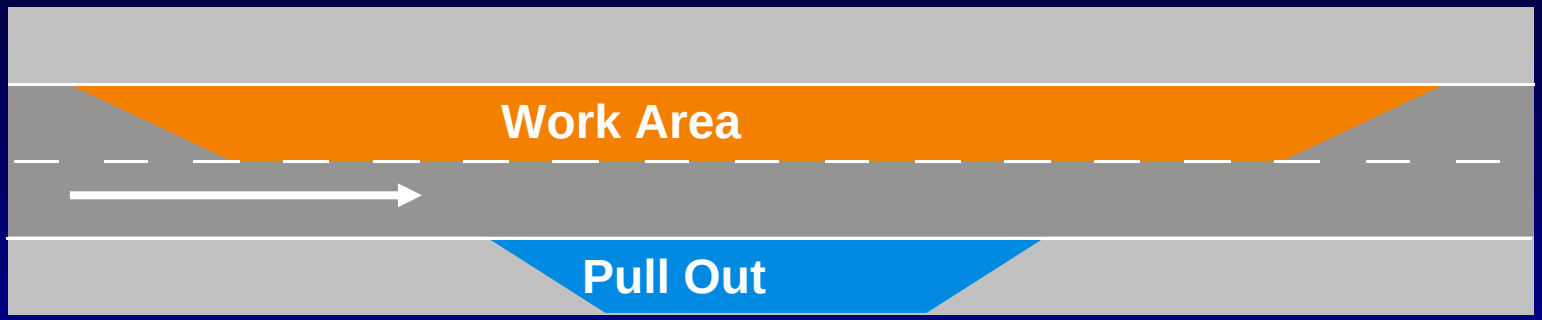
Is It Practical?

- **Legal/political challenges**
  - *Continuous vehicle tracking*
  - *Visual verification of a violation*
  - *"Speed trap" perceptions*
- **Financial challenges (ASE $50,000+)**
- **Deployment/maintenance challenges**

“Enforceable” Work Zone Designs

- Limit allowable work zone lengths
- Elevated pads
- Enforcement pull-out areas

Enforcement Pull-Out Areas



- How long?
- How far apart?
- How best to incorporate?

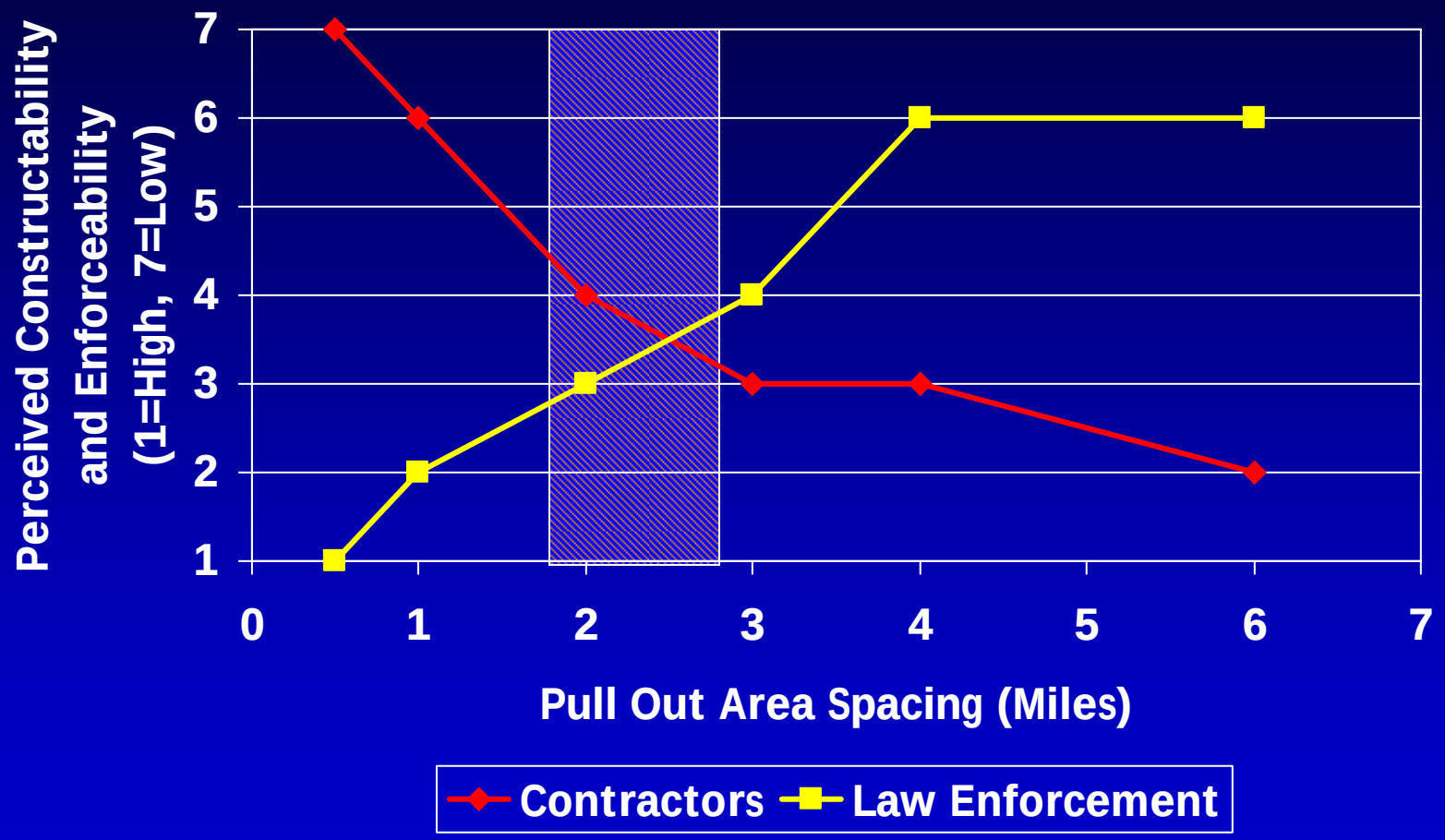
Pull-Out Area Length

- **AASHTO HOV Design Guide**
- **Typical driver deceleration/ acceleration values**
- **Observed driver behavior after receiving a citation**
- **Conclusion:**
  - *Pull out areas should be ¼ mile long on high-speed facilities*

Pull Out Area Spacing

- **Direct MOEs and costs difficult to assess**
- **General hypothesis:**
  - *Not too closely spaced (constructability)*
  - *Not too widely spaced (enforceability)*

Building a Consensus



Other Considerations

- Enforcement buy-in on each project
- Provide appropriate sight distance
- Look for ways to incorporate into standard construction phasing