Future Interstate System
Safety Considerations

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Outline

• Speed
• Vulnerable Road Users
• Large Trucks
• Incident Management
• Guiding Principles
Speed – Driver Expectations

- Uniformity
- Condition-responsive

Source: WS DOT

Maximum Posted Daytime Speed Limits on Rural Interstates

Source: IIHS

United States map showing maximum posted daytime speed limits on rural interstates. The states are color-coded with the following speed limits:
- 60 mph (light blue)
- 65 mph (darker blue)
- 70 mph (red)
- 75 mph (gray)
- 80 mph (orange)
- 85 mph (light orange)

Source: IIHS
Speed – Automated Enforcement

- Cannot ignore the success of these programs on freeways in other countries
Speed – Transition Zones

- Enhanced systems to reduce speeds in transition zones

Source: MO DOT
Vulnerable Road Users

- 20% of pedestrian and bicyclist intersection/intersection-related fatalities involve motorists at entrance/exit ramps

Source: Caltrans
Vulnerable Road Users

- Divided communities – poorly planned interstate corridors can create mobility and safety challenges for peds/bikes

Source: Colorado DOT
Large Trucks

- Dedicated Facilities (separated modes)
Large Trucks

• Size, weight, configuration
• Enhanced inspection data
Large Trucks

• Driver Performance
  – Fatigue
  – Hours of service
  – Electronic logging devices
Large Trucks

• Platooning
  – Passenger car driver decision-making
  – Lengthy passing maneuvers
  – Infrastructure implications

Source: TechNewsWorld
Incident Management

• Emergency response notification
• Automated diversion

Source: The State Journal Register
Guiding Principles

• Technology **alone** will not be the solution
  – Mixed fleet for 50+ years
  – Practitioner and consumer education

• Utilize best practices (national and global)
  – New interchange designs
  – Automated enforcement
  – Safe Systems Approach

• Testbeds for technology
  – Separated facilities for large trucks
  – Dedicated corridors
Thank You
Four Principles of a Safe System in Road Traffic*

1. People make mistakes that can lead to road crashes.
2. The human body has a limited physical ability to tolerate crash forces before harm occurs.
3. A shared responsibility exists amongst those who design, build, manage and use roads and vehicles and provide post-crash care to prevent crashes resulting in serious injury or death.
4. All parts of the system must be strengthened to multiply their effects; and if one part fails, road users are still protected.

* Expanding the Reach of a Safe Systems Approach, “Zero Road Deaths and Serious Injuries,” Organisation for Economic Co-operation and Development
6 Countries Have Already Adopted a Safe Systems Approach to Road Safety

Did You Know?

Australia
Luxembourg
Netherlands
New Zealand
Sweden
United Kingdom