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MODEL INVENTORY OF ROADWAY ELEMENTS

Gaps in Roadway Data: An Assessment of State Databases

Asset Management: Laying the Groundwork for Safety Analysis Tools

Portland, OR

October 18, 2009

Why MIRE?

- MIRE Concept
  - Need for inventory data to advance safety
  - Standardized definitions
- MIRE Applications
  - New safety tools – SafetyAnalyst, IHSDM, HSM
  - Enhanced problem identification
  - Enhanced targeting of specific treatments

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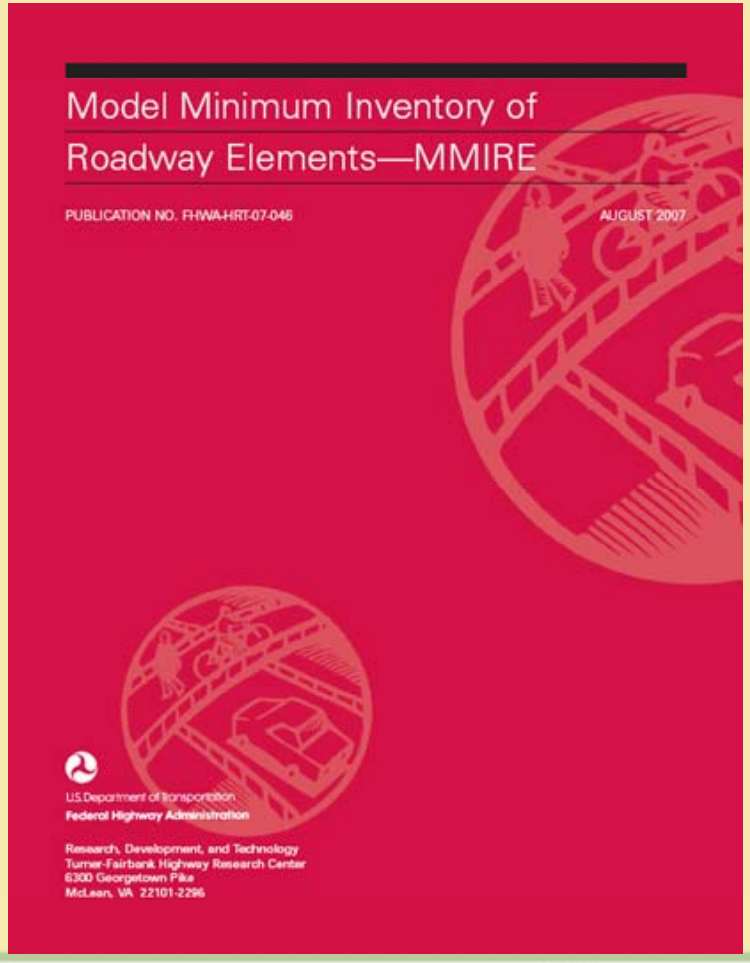
Starting Point

- MMIRE Report (August 2007)
- 180 proposed elements
- Categories
  - Segments
    - Alignment
  - Junctions/Intersections
    - Approaches
  - Interchanges
    - Ramps



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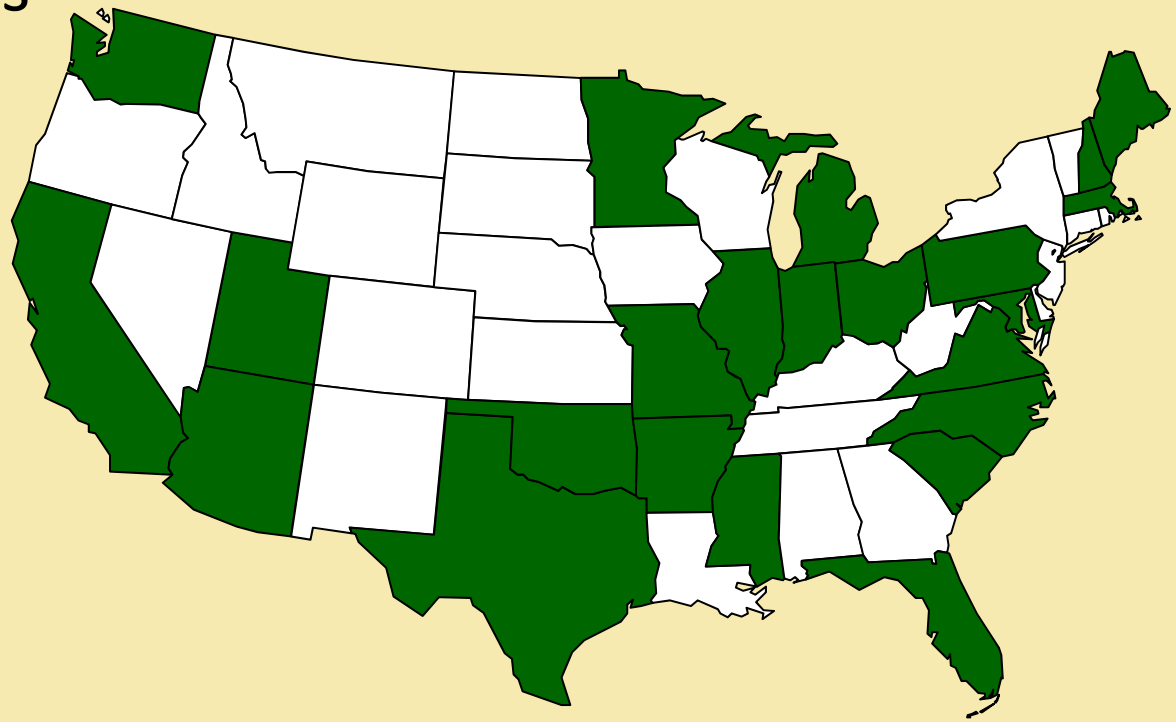
State Database Assessment

- 23 State databases
  - HSIS States
  - State databases obtained through other FHWA research efforts



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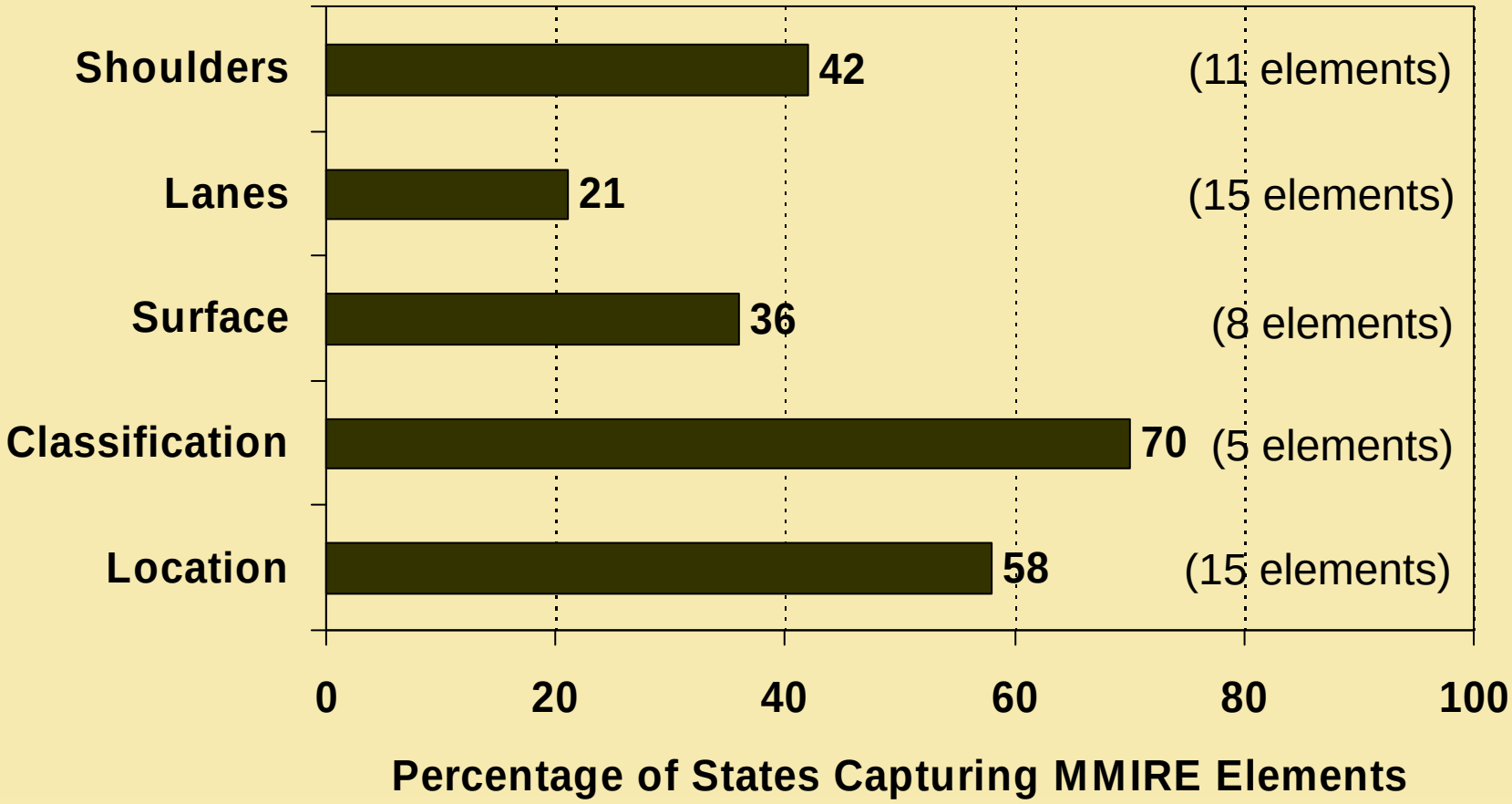
Segment Elements



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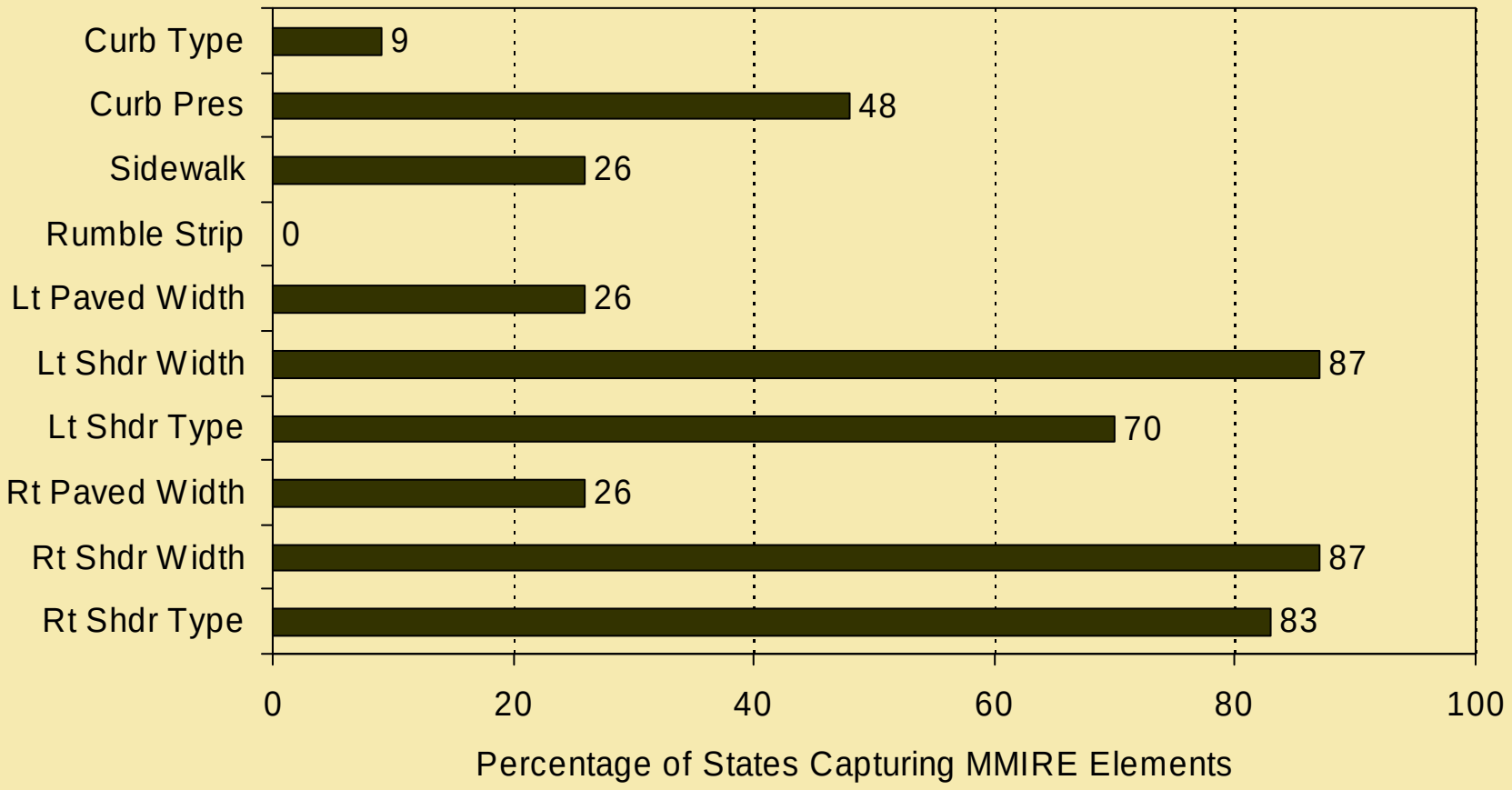
Shoulder Elements



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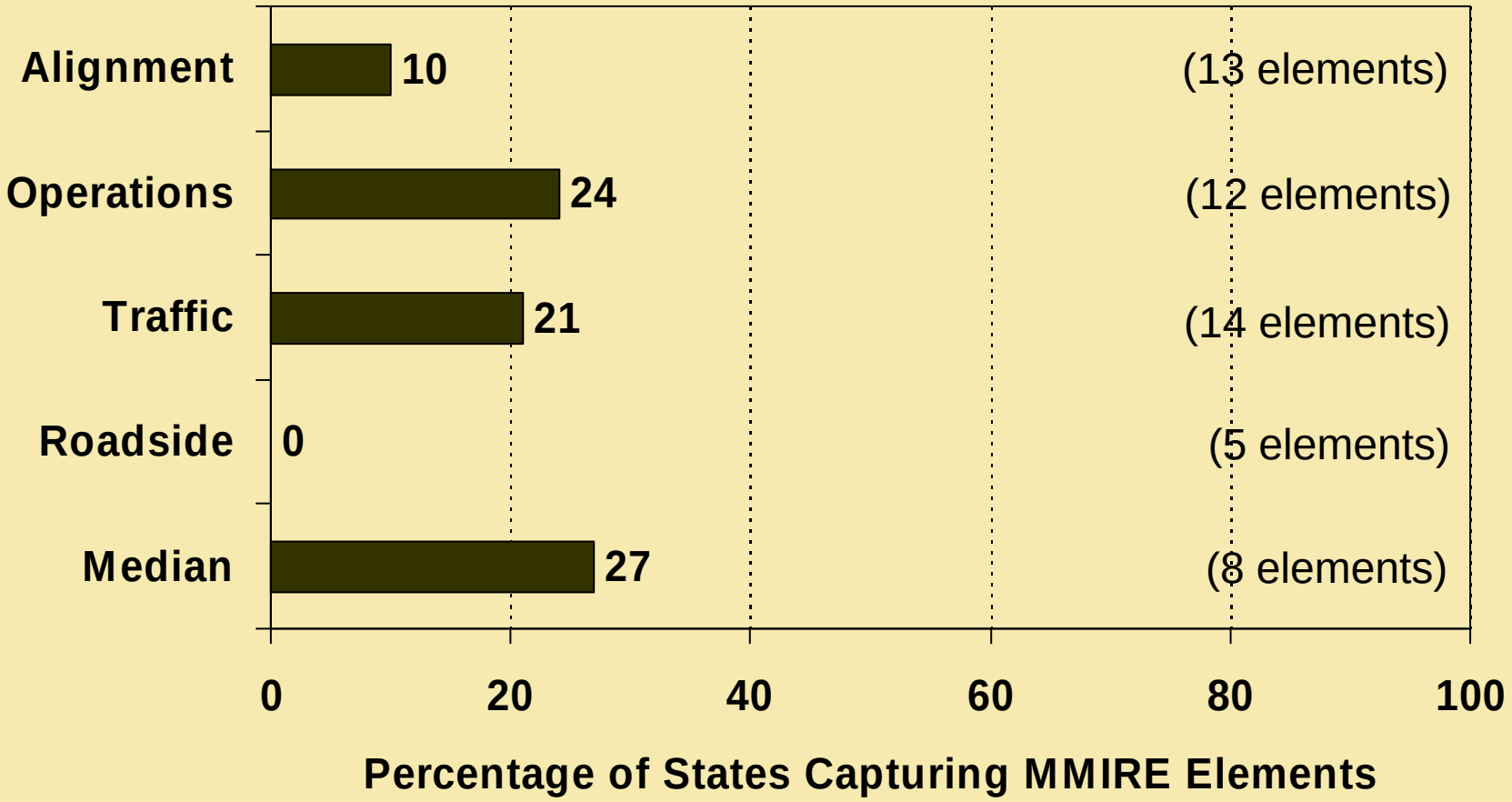
Segment Elements



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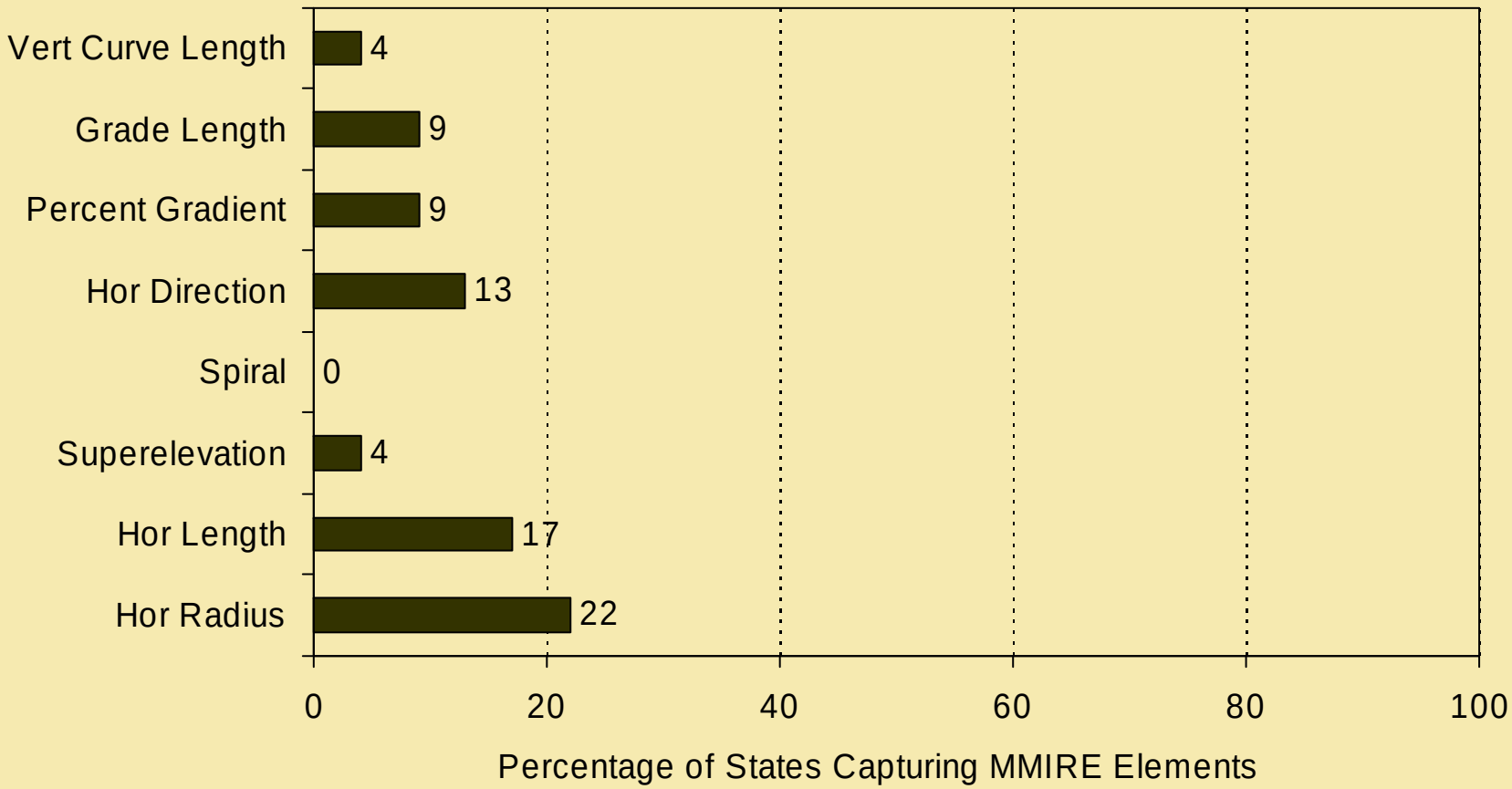
Alignment Elements



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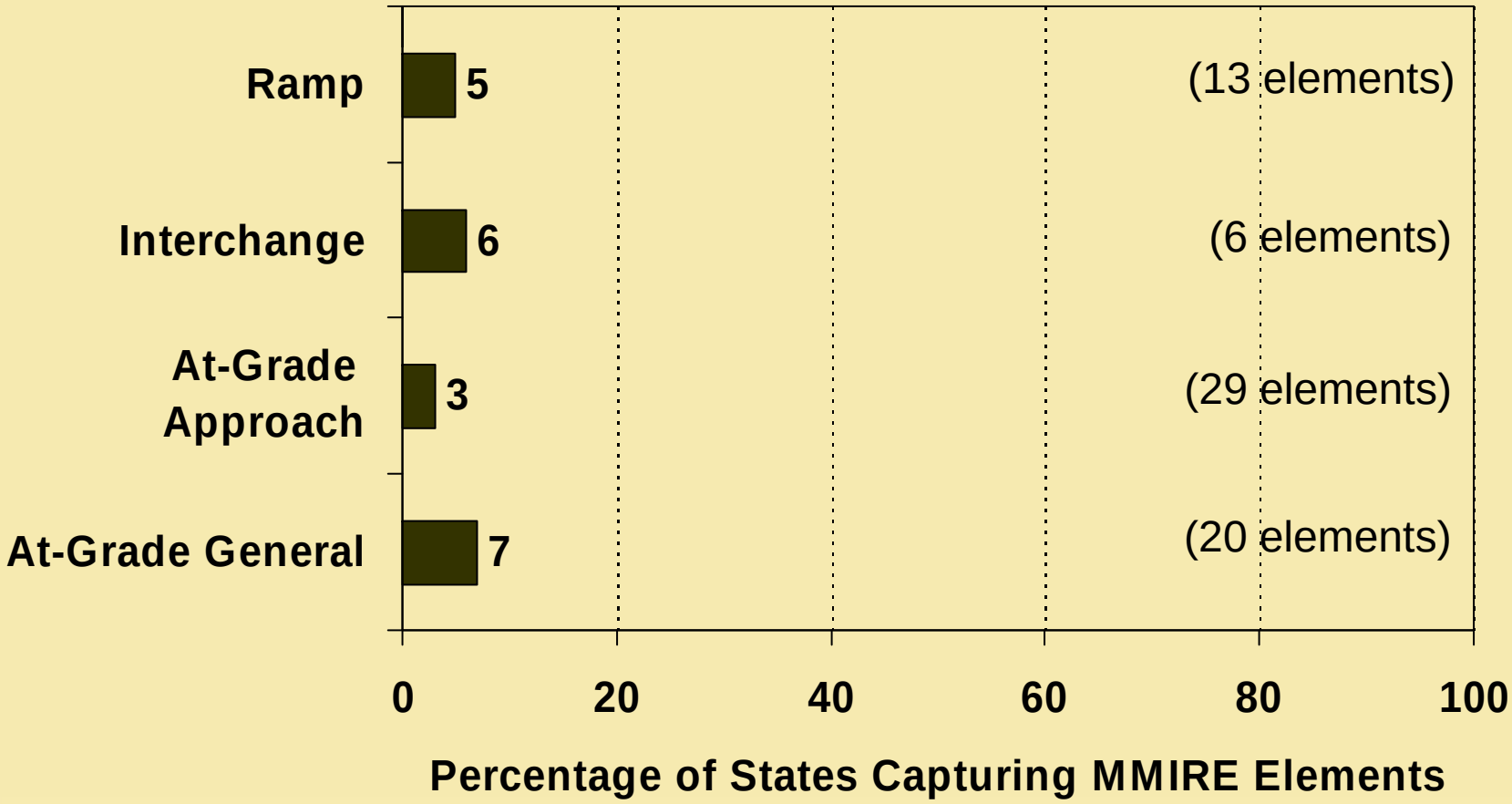
Junction & Interchange Elements



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Specific Elements

> 80% coverage

- County
- Functional Class
- Surface Type
- No. of Thru Lanes
- Rt Shoulder Type/Width
- Median Type/Width
- AADT

< 10% coverage

- Surface Friction
- Rumble Strip Presence
- Sideslope
- Clearzone Width
- Driveways
- Ped/Bike/MC exposure
- Bike Lanes
- Curve Radius/Length
- Lighting

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Summary

- Need for Roadway Inventory Data
  - Advance safety
  - Apply new analysis tools
- State Level Assessment
  - 23 databases
  - Substantial gaps in desired data elements
  - Junctions, Alignment, Operations, Ped/Bike
- Local Level?

Questions?

- How do we fill these gaps?
- Can we take advantage of asset management systems that are in place?
  - Discover existing data sources
  - Collaborative efforts for data acquisition
- Can technology help?
  - Mobile data collection
  - Digital image processing

Government Accountability Report

November 2008, Highway Safety Improvement Program (HSIP) Recommendations for Executive Action:

(1) Define which roadway inventory data elements a state needs to meet federal requirements for HSIP

(2) Set a deadline for states to finalize development of the required roadway inventory data

(3) Require states to submit schedules to FHWA for achieving compliance with this requirement