Intersection Safety

for all Roadway Users in Maryland

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Maryland State Highway Administration
Deputy Administrator and Chief Engineer for Operations

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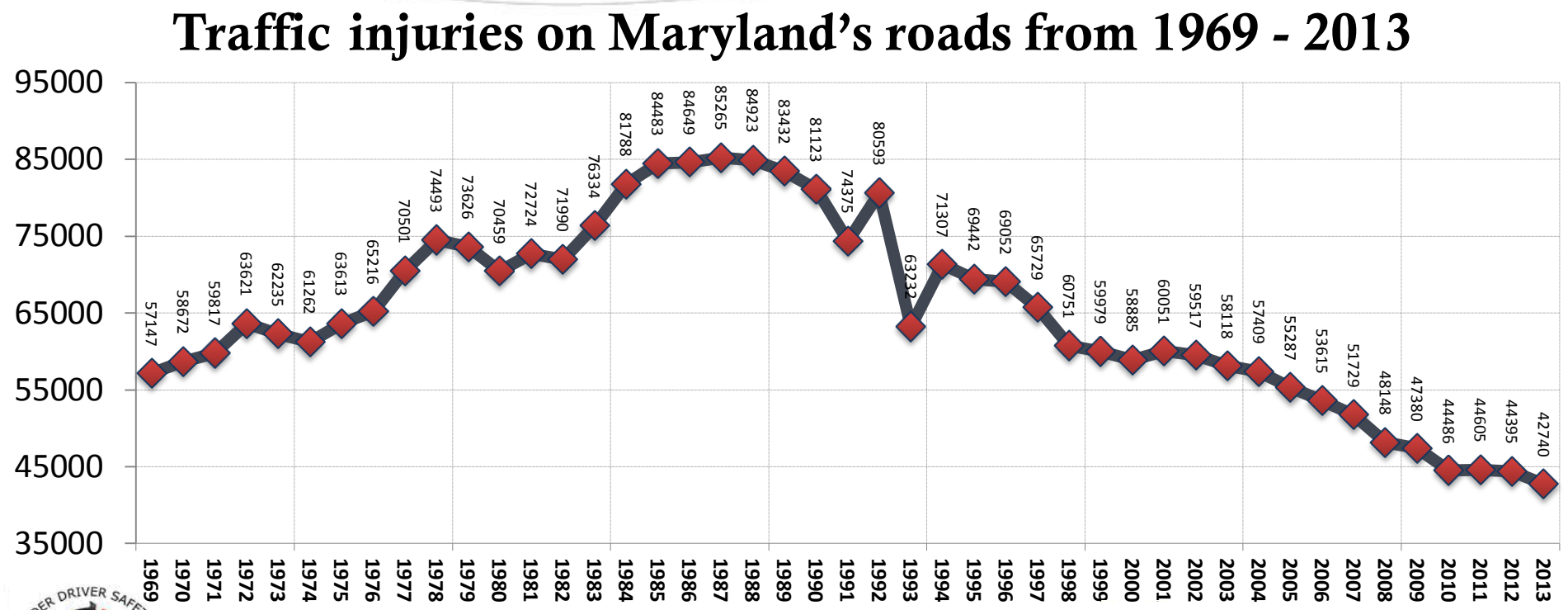
State Highway Administration

Safety is our #1 Priority



Current Best-Practices

Easier-to-Read, Clearview Fonts

- Clearview Highway 5-W
- Highway Gothic Series E

- Clearview Highway 3-W
- Highway Gothic Series D

MARYLAND OLDER DRIVER SAFETY SYMPOSIUM "Safe Mobility for Life"

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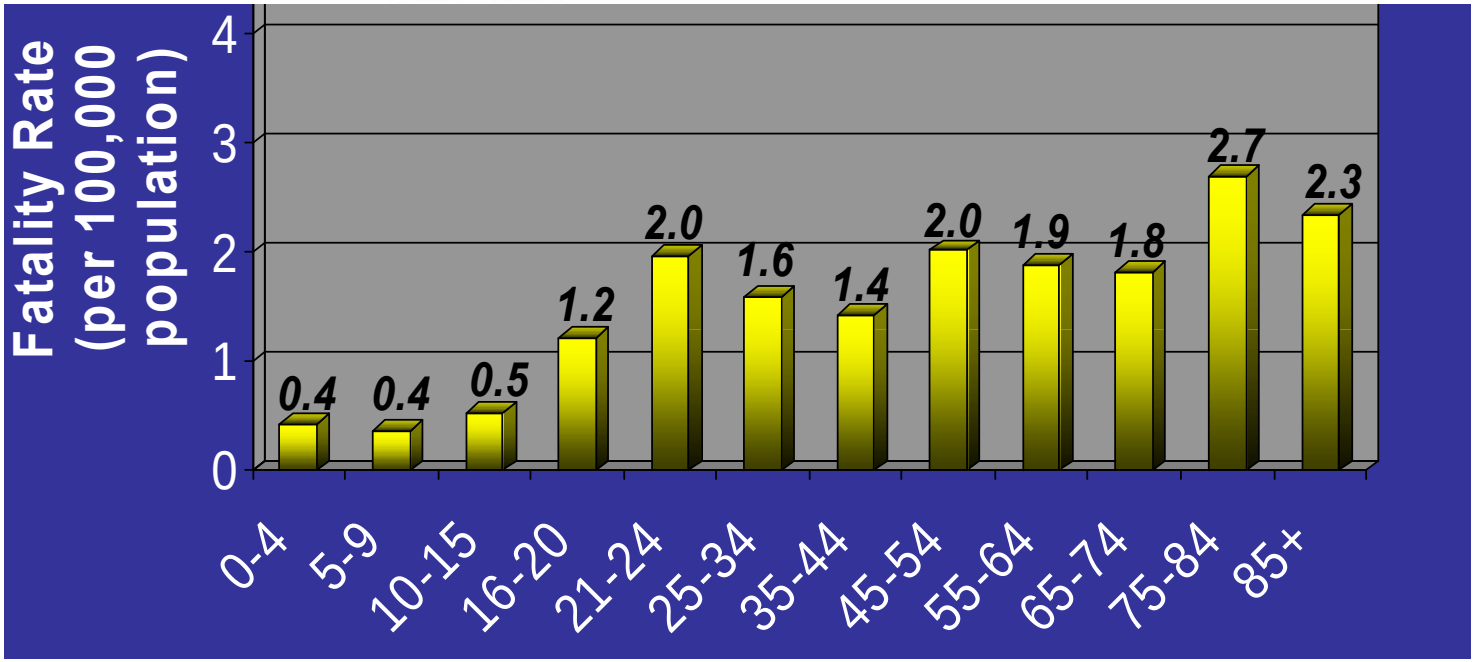
Current Best-Practices

Raised Pavement Markings (Reflectors)

Older Pedestrians Overrepresented

Pedestrian Fatality Rate By Age



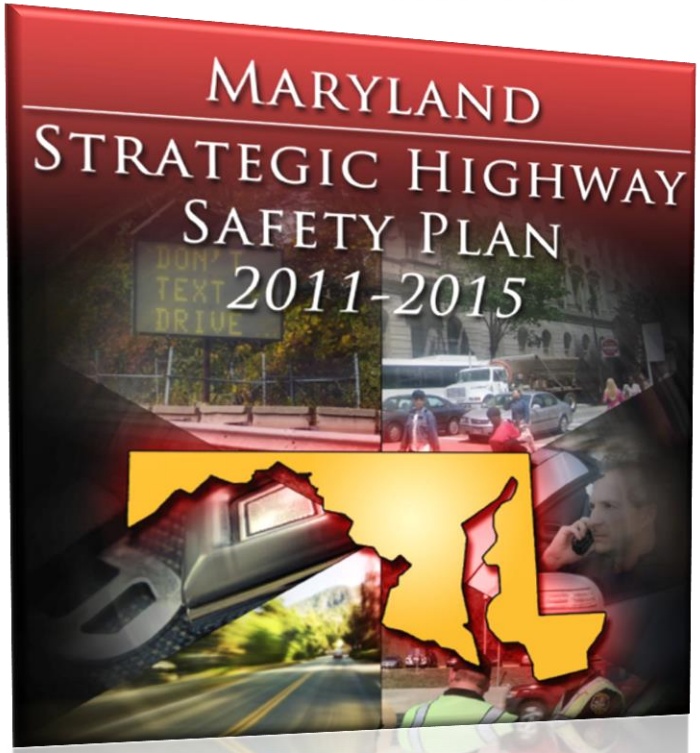
Source: Traffic Safety Facts, 2012 (National Highway Traffic Safety Adm.)

Current Best-Practices

Accessible / Count-Down Signals

Strategic Planning, Looking Ahead

ZERO TOWARD ZERO DEATHS MARYLAND EVERY LIFE COUNTS



- Six Emphasis Area Teams, including Highway Infrastructure & Pedestrians
- Communication and Collaboration across all four E's of Safety
  - Education
  - Engineering
  - Law Enforcement
  - Emergency Medical Services

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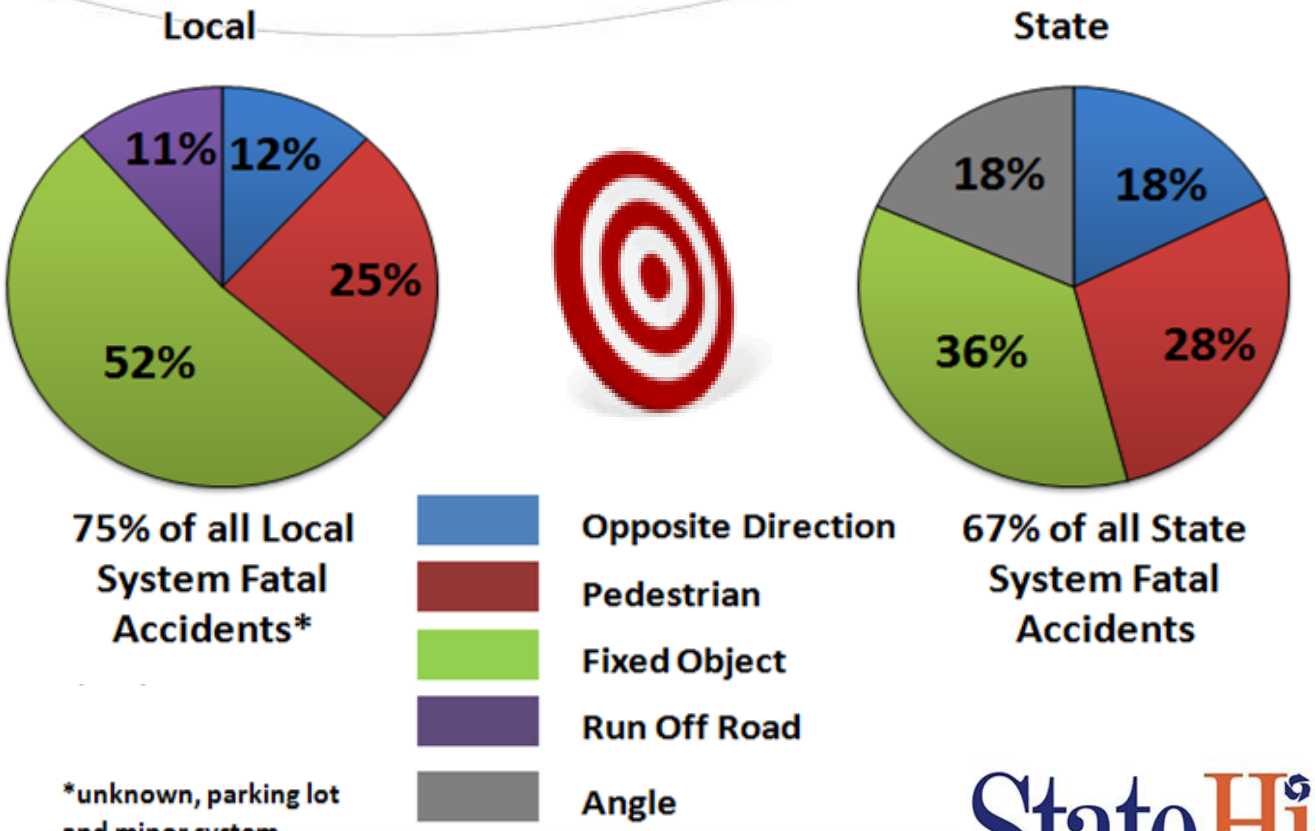
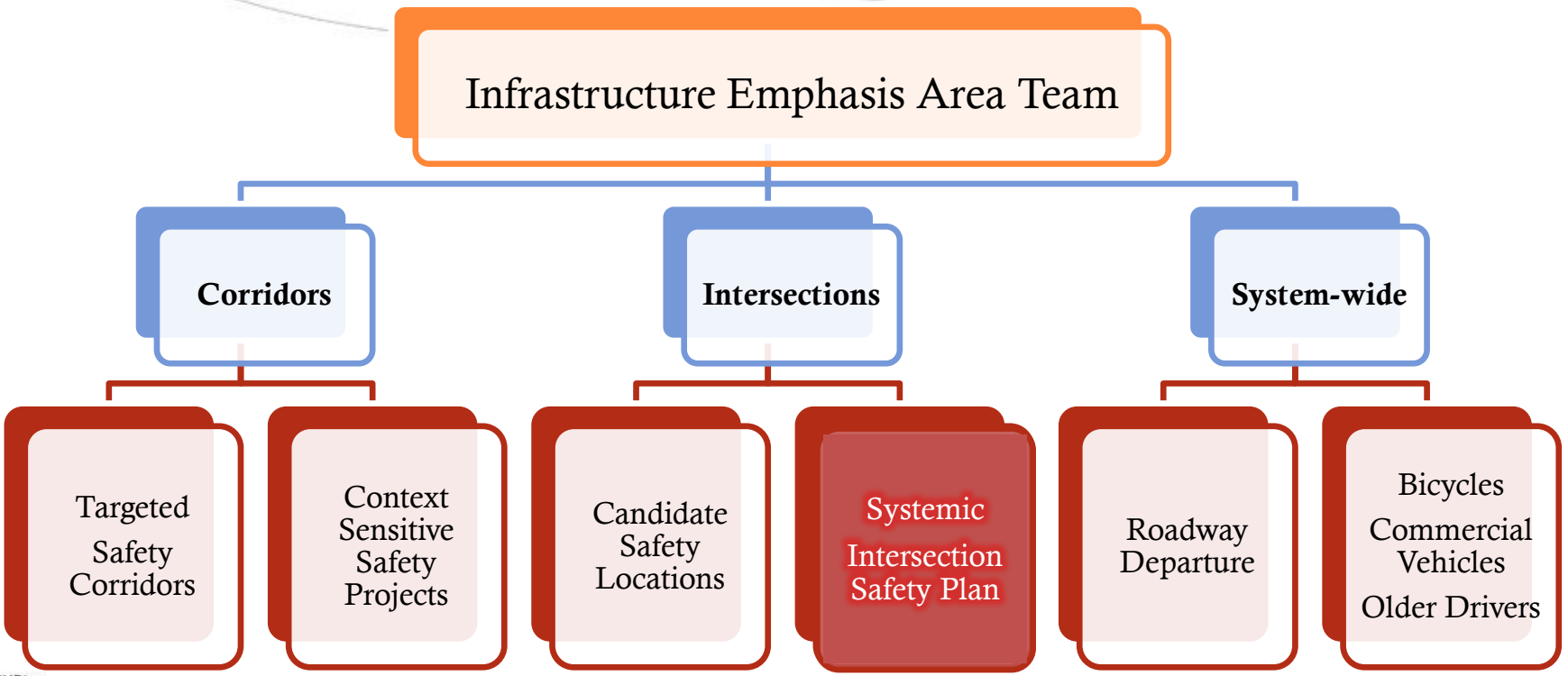
Data-Driven Targeting



Data-Driven Targeting



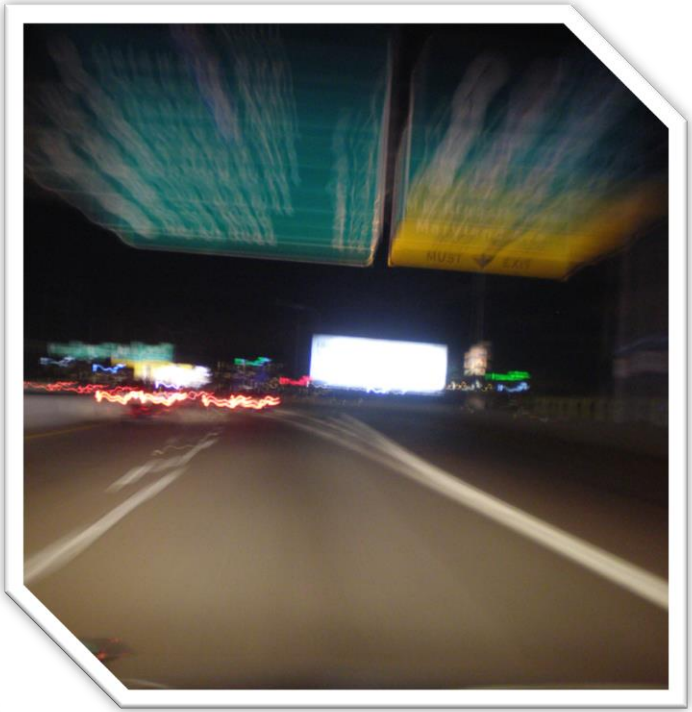
Intersection Safety

Older Driver Crash Statistics

- Per mile traveled, fatal crash rates increase markedly after age 80
- Between 2002 – 2012, approximately 1 out of 5 fatal crashes in Maryland involved drivers over the age of 65
- Only about 5% of fatally injured drivers ages 70+ had BAC 0.08 percent, compared with 17% for ages 60-69 & 43% for ages 16 to 59
- Crashes at intersections account for about 39% of fatal crash involvements among drivers ages 80+ (compared to 21% for total population)

Intersection Safety

5 Top Crash Types for Older Drivers



- Turning left at an intersection with stop sign
- Turning left at an intersection on a green light without a dedicated green turn arrow
- Turning right at a yield sign to merge with traffic at speeds of 40 - 45 mph
- Merging onto a highway from a ramp that has a yield sign
- Changing lanes on a road that has four or more lanes

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Intersection Safety

4 Most Common Older Driver Errors Before an Intersection Crash

- Not noticing potential conflicts or traffic signs and signals
- Misjudging gaps when crossing traffic
- Moving or stopping the vehicle too slowly
- Conducting a visual search poorly.

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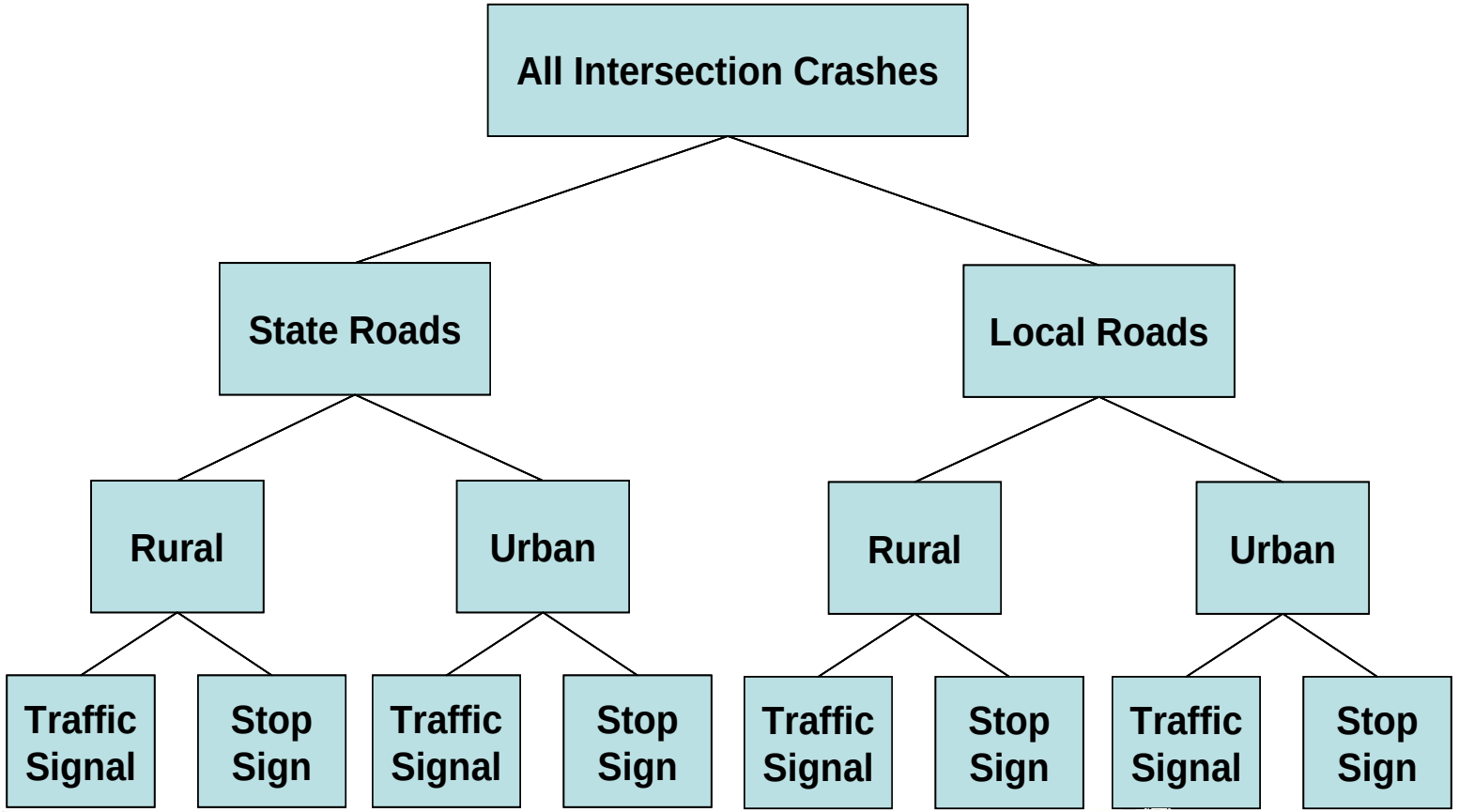
Developing Maryland's Systemic

Intersection Safety Implementation Plan

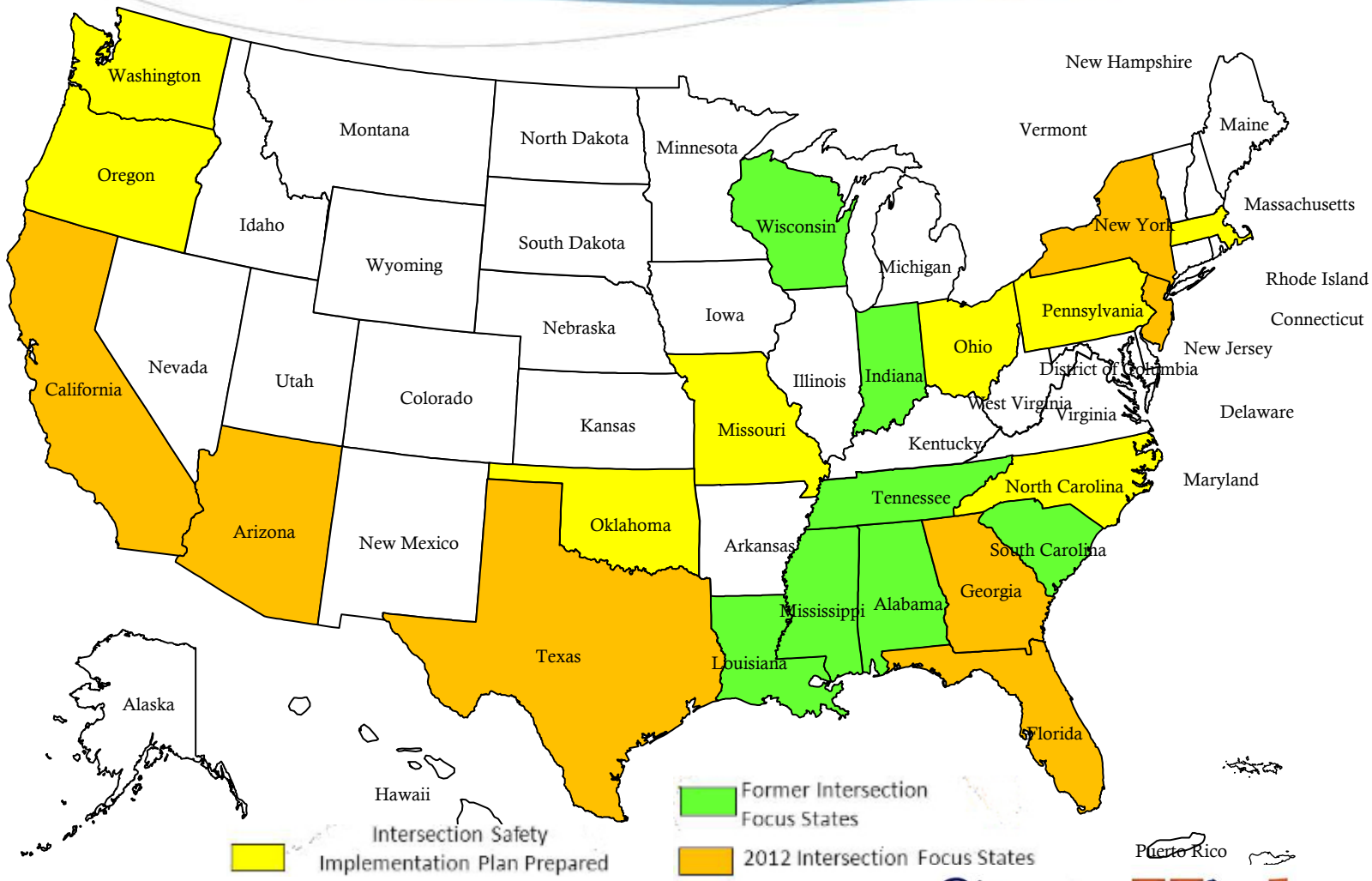
- Improve substantial number of targeted intersections which have severe crashes
- Rely on low-cost, simple but proven and effective countermeasures
- Improve 3-6% of intersections that have 25-45% of statewide intersection crashes
- Higher overall cost but greater impact in terms of statewide levels of lives saved

State **and** Local Roadways

Intersection Safety Implementation Plan

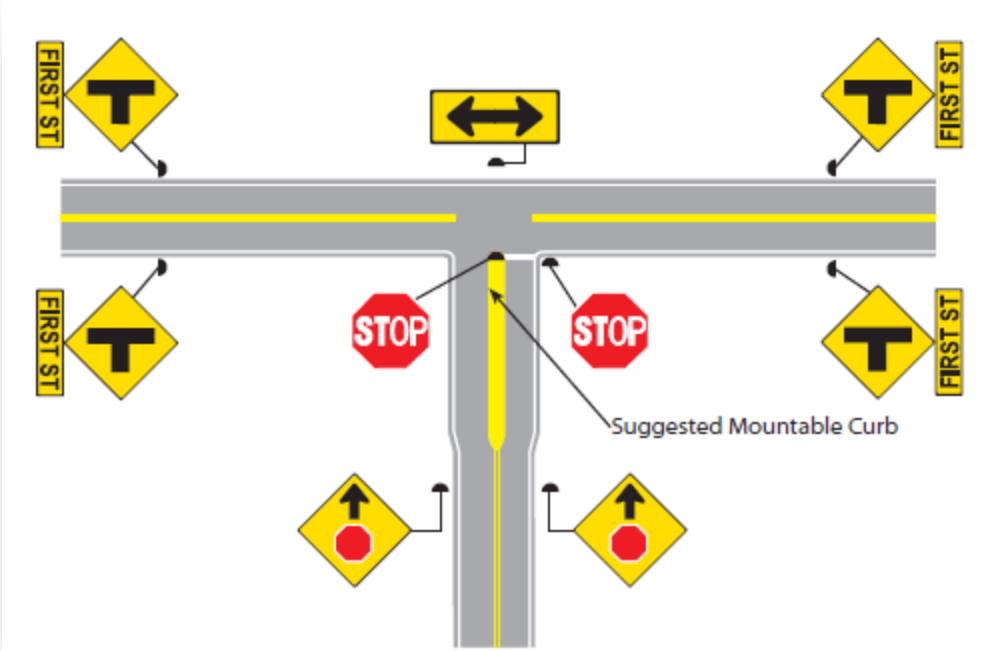


Intersection Safety Focus States FHWA



Cost-Effective Countermeasures

Intersection Safety Implementation Plan



Basic set of sign and marking improvements

- 40% Crash Reduction Factor (CRF)
- $5,000 to $8,000

Cost-Effective Countermeasures

Intersection Safety Implementation Plan

Transverse Rumble Strips or "Stop Ahead" markings

- 28% CRF for Rumble Strips
- 15% CRF for "Stop Ahead"
- $5,000 to $8,000

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Cost-Effective Countermeasures

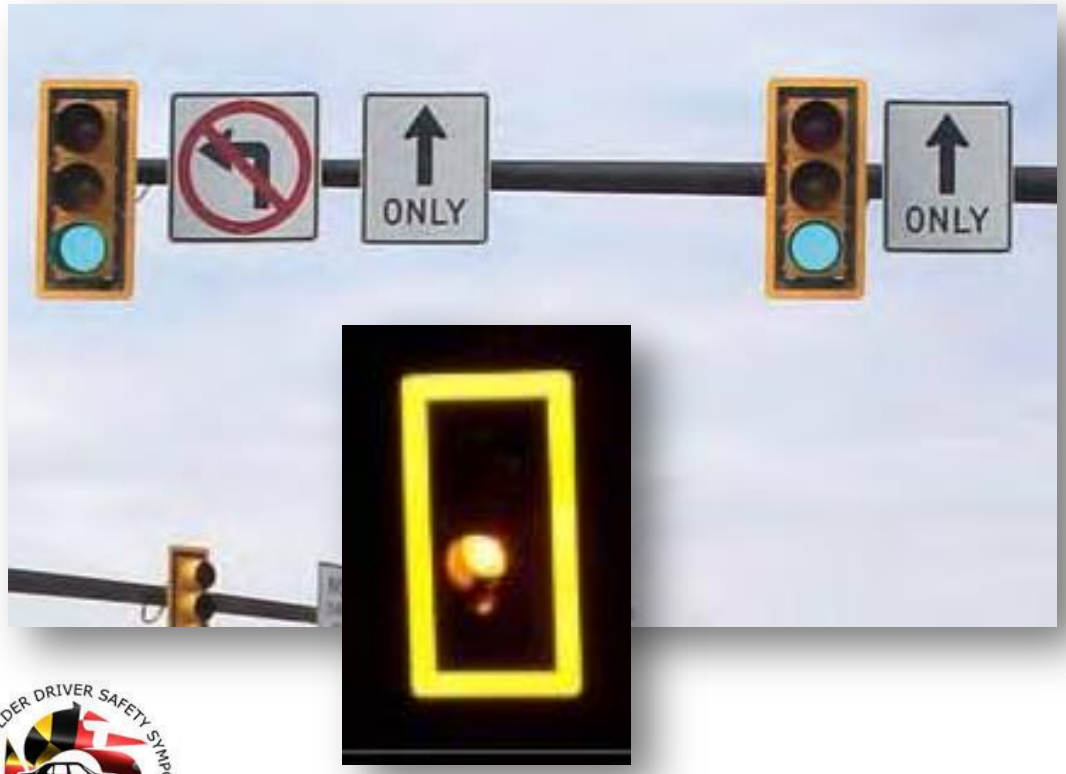
Intersection Safety Implementation Plan

Advanced or overhead Intersection Beacons

- 10% CRF overall
- 13% CRF for right angle crashes
- $5,000 to $15,000

Cost-Effective Countermeasures

Intersection Safety Implementation Plan



Basic set of signal and sign improvements

- 30% Crash Reduction Factor
- $5,000 to $30,000

Cost-Effective Countermeasures

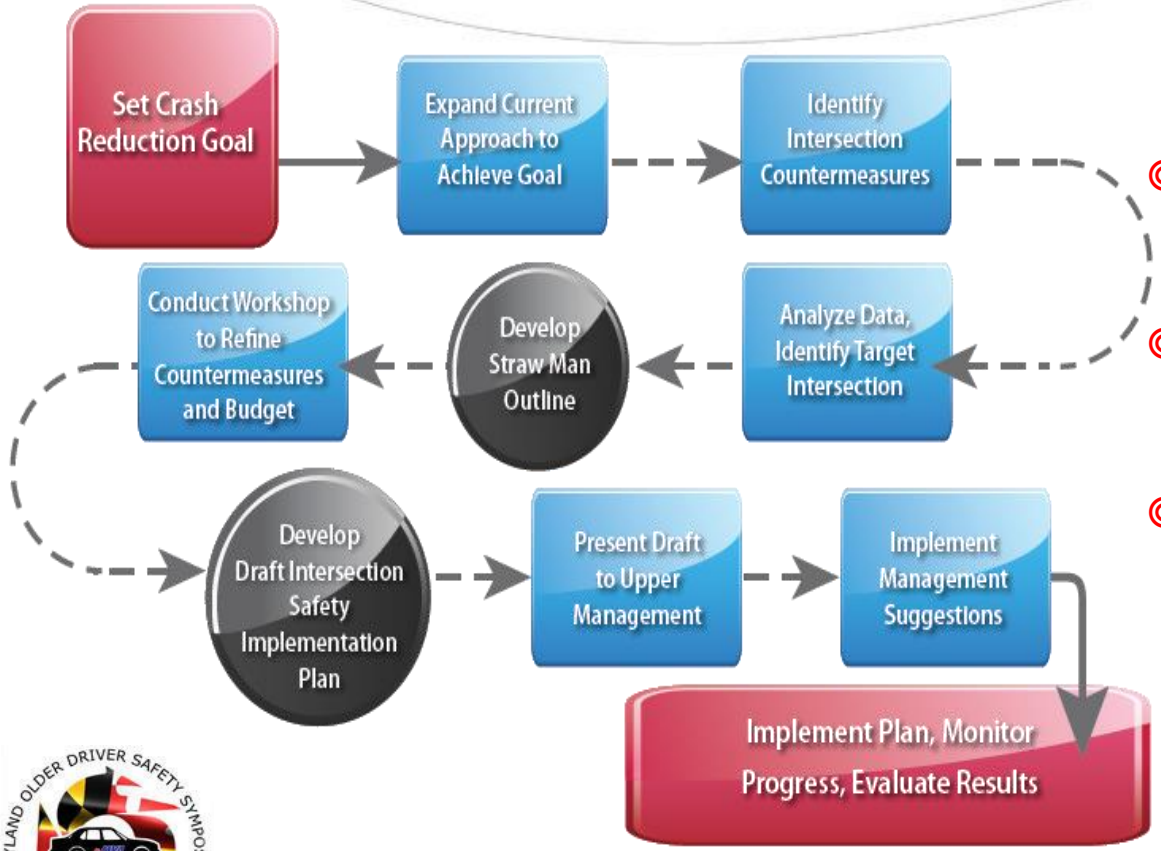
Intersection Safety Implementation Plan

Change of permitted and protected left-turn phase to protected-only

- 41-48% CRF of Left-Turn crashes
- $5,000 to $10,000

Schedule

Intersection Safety Implementation Plan



- Plan under-development over the next year
- Collaborative effort with local partner agencies
- Next-step will be to implement a pilot in a county or district

Questions?

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