

# EDC-7: Nighttime Visibility for Safety

National Perspective



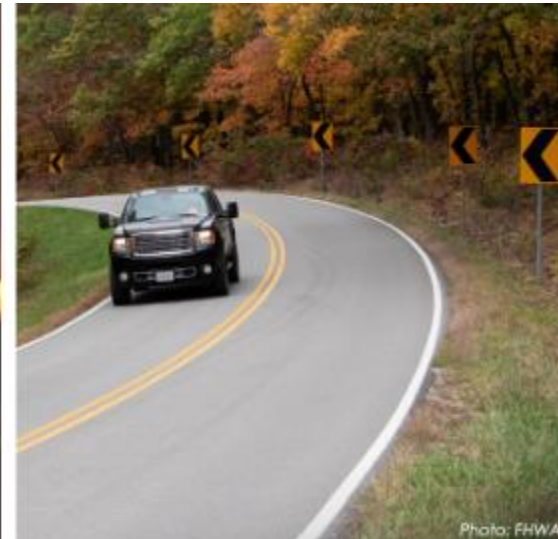
U.S. Department of Transportation  
**Federal Highway Administration**



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# Nighttime Visibility for Safety

- The nighttime fatality rate on the Nation's roadways is 3 times higher than the daytime rate, and 76 percent of pedestrian fatalities occur at night.
- Enhancing nighttime visibility where non-motorists mix with traffic during darkness will save lives.

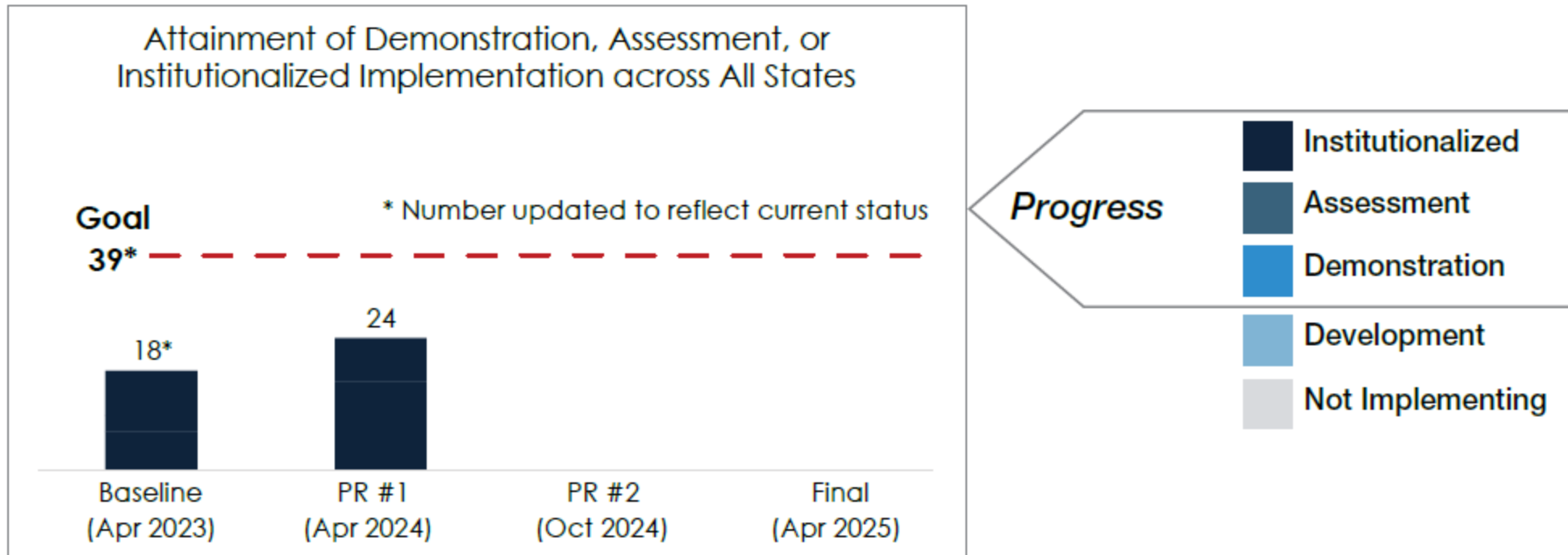






# National Perspective

- 16 States are demonstrating and assessing nighttime visibility for safety, while another 8 States have institutionalized it.

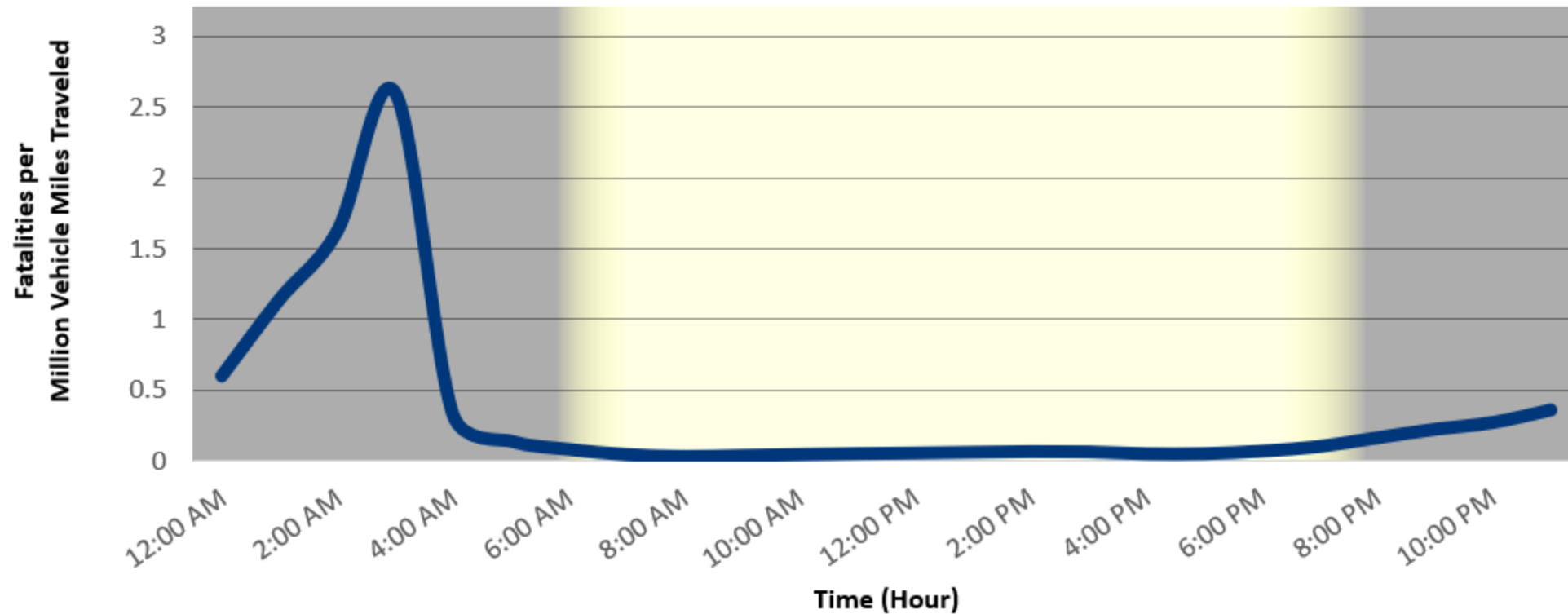


# Maintaining Pavement Marking Retroreflectivity



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Fatality Rate per Million VMT by Hour (2015-2019)





# Maintaining Pavement Marking Retroreflectivity

	<b>Standard</b>		<i>Guidance</i>
<b>Speed Limit</b>	<35 mph	≥35 mph	≥70 mph
<b>Retroreflectivity Level</b>	n/a	50 mcd/m <sup>2</sup> /lx	100 mcd/m <sup>2</sup> /lx

Optional Exclusions:

- Ambient illumination
- Less than 6,000 ADT
- Dotted extension lines
- Curb markings
- Parking spaces
- Shared-use paths

NOTE: mcd/m<sup>2</sup>/lx means millicandelas per square meter per lux



# Proven Safety Countermeasures



## Safety Benefits:

Lighting can reduce crashes up to:

**42%**

for nighttime injury pedestrian crashes at intersections.<sup>1</sup>

**33-38%**

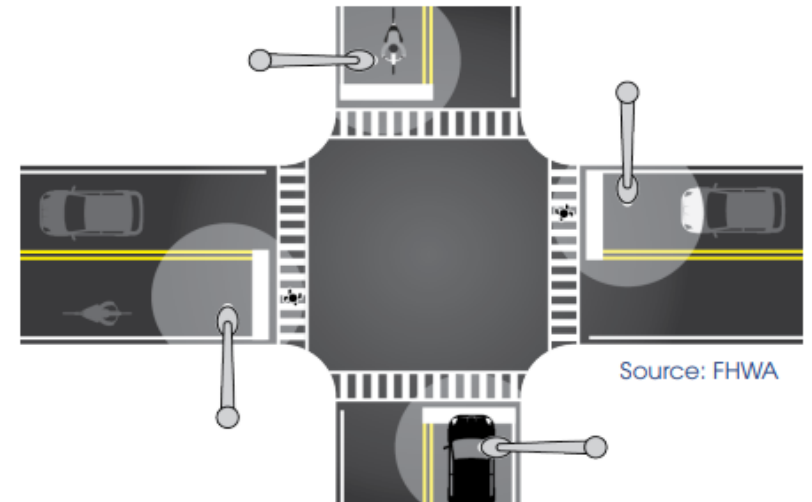
for nighttime crashes at rural and urban intersections.<sup>2,1</sup>

**28%**

for nighttime injury crashes on rural and urban highways.<sup>1</sup>

## Lighting

- Agencies should consider providing lighting to intersections based on factors such as:
  - history of crashes at nighttime,
  - traffic volume,
  - the volume of non-motorized users,
  - the presence of crosswalks and raised medians,
  - and the presence of transit stops and boarding volumes.



Source: FHWA

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