



The State of Highway Safety in New Mexico

New Mexico Transportation Safety Summit 2024

New Mexico boasts more than 150,000 road miles, however the makeup of the network introduces additional barriers — and opportunities — as the state moves toward zero traffic related fatalities.

Lots to Cover

1. The Challenge
2. The Need
3. Where We Have Been
4. Where We Can go

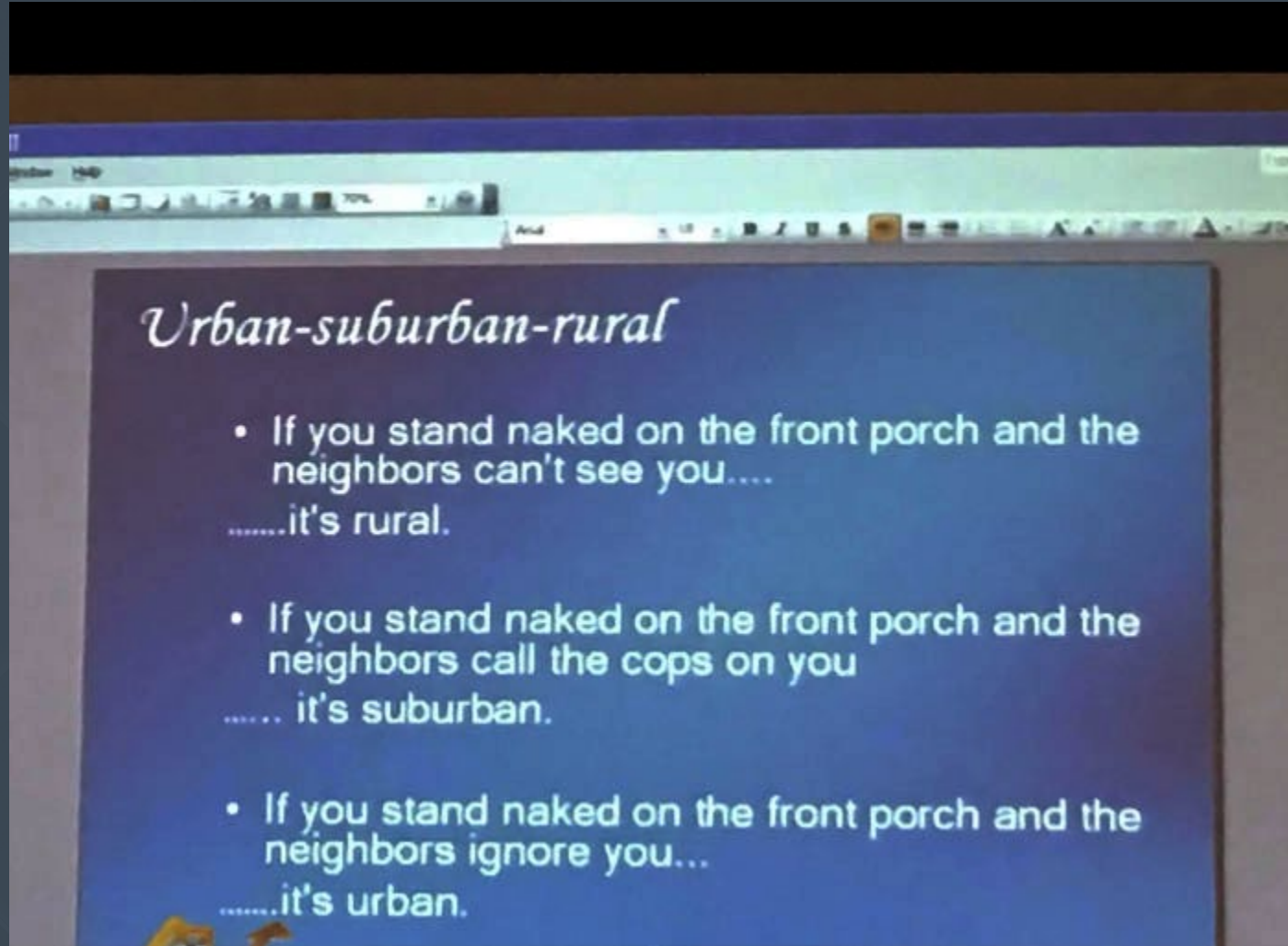





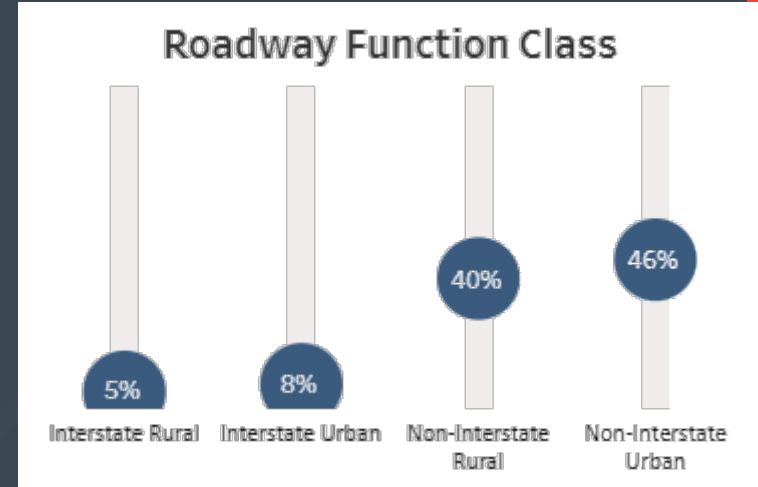
The Challenge



Urban vs. Rural



Comparison – National



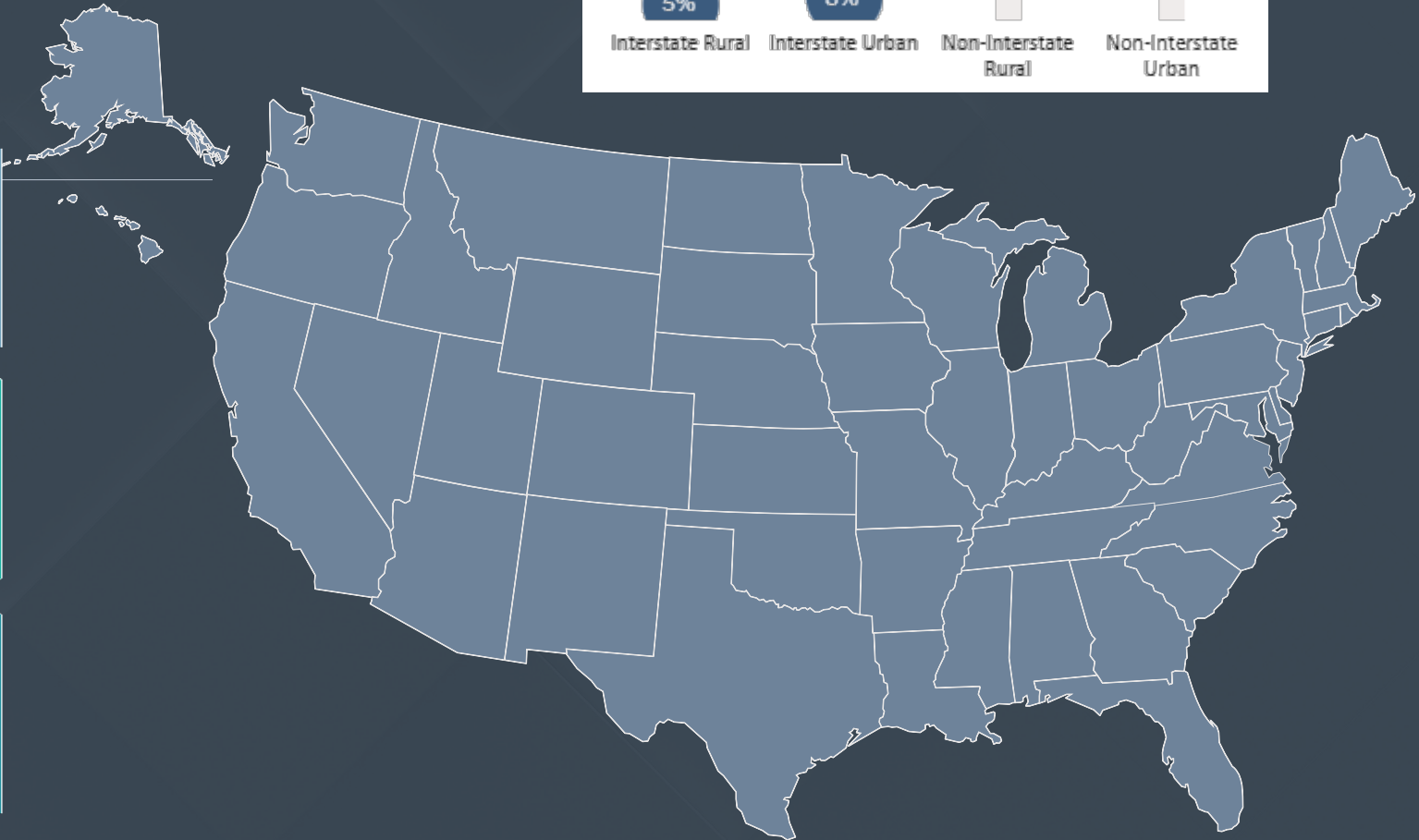
19% of residents live in rural areas but 68% of our nation's total lane-miles are in rural areas




**Urban areas:
1,056 lane-miles
per 100,000 residents**



**Rural areas:
9,494 lane-miles
per 100,000 residents**

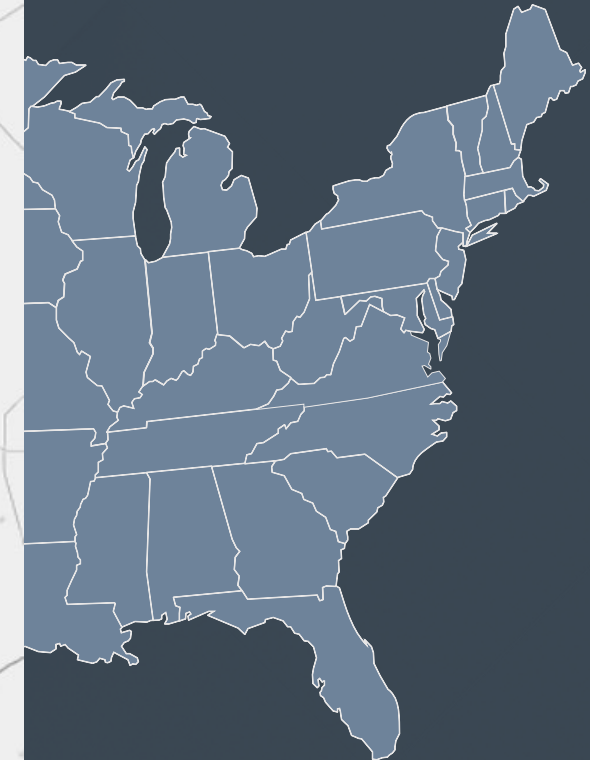
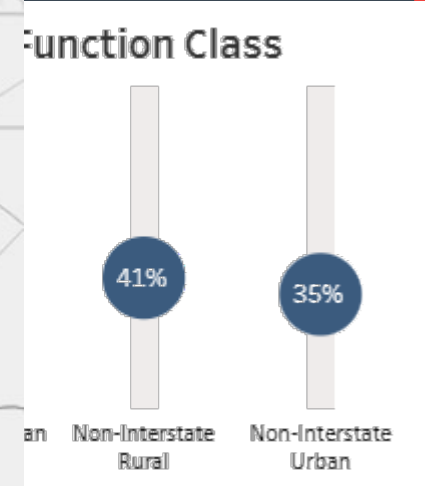
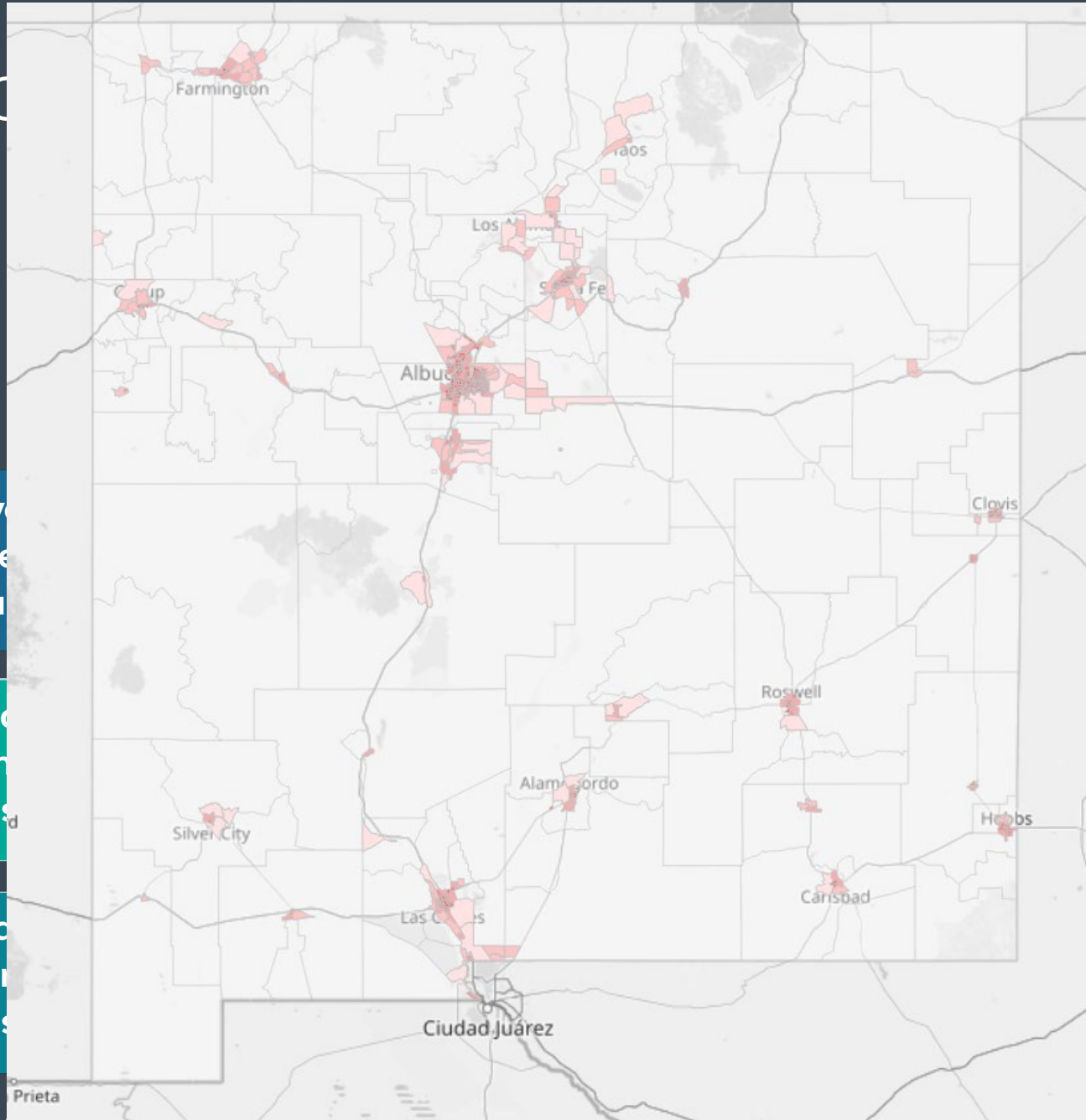


Comparison

 25% of residents live in urban areas but 83% of the state's road miles are in rural areas

 Urban areas have 1,664 lane-miles per 100,000 residents

 Rural areas have 25,158 lane-miles per 100,000 residents



Access

School:

- Urban: average 3 – 5 miles
- Rural: average >6 miles

Healthcare (hospital):

- Urban: average 4.4 miles (5 – 19 minutes)
- Suburban: 5.6 miles
- Rural: average 10.5 miles (6 – 34 minutes)

Groceries:

- Median distance to a Wal-Mart in the United States is 4.2 miles (to a Target, five miles)
- Distances are larger for people in rural areas; areas with less than 5,000 people within a five-mile radius, the median distance to a Wal-Mart is 14.3 miles (to a Target it's 34.8 miles)



Economic Drivers

Farming

- Rural areas in US account for 97% of land area and majority of farms

Resource extraction

- Mining and energy resources generally flow **from** rural areas

Tourism

- hiking, golfing, biking, hunting, fishing and water sports. Rural areas are also home to beaches, national and state parks, wineries, orchards and other national amenities

Changes in employment

- Pandemic saw many people leave cities and work remotely from more rural areas
- Slow returns-to-office have kept people further from cities

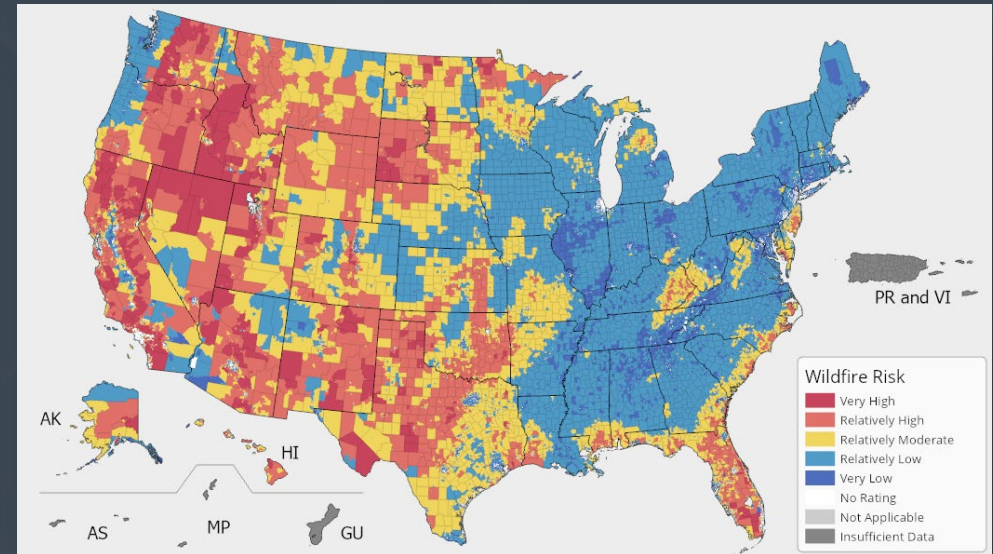
Emergencies

Evacuation routes

First-responder access

Detours during/after event

Increased traffic



2024 Wildfires in NM as of Aug. 19:
665 fires, 84,631 acres (132.2 sq. miles)

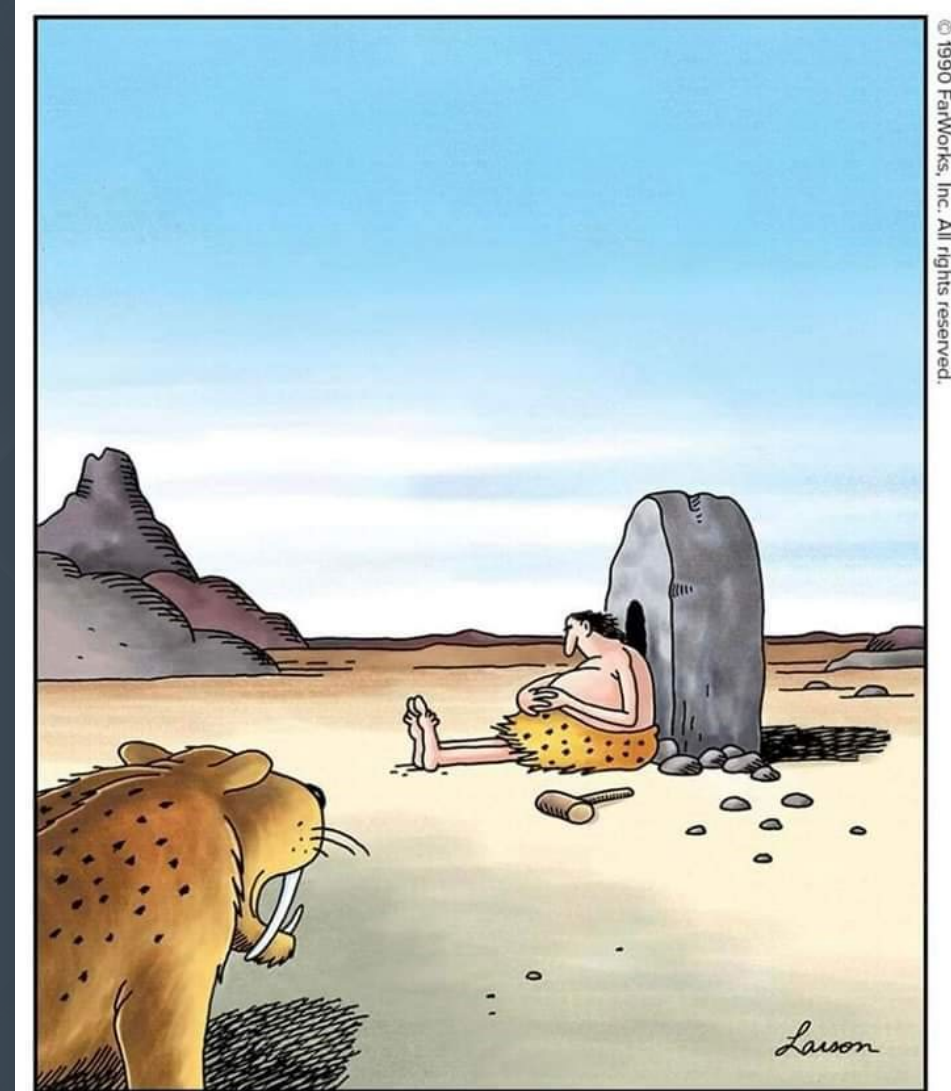


The Need



Recognizing the Issues

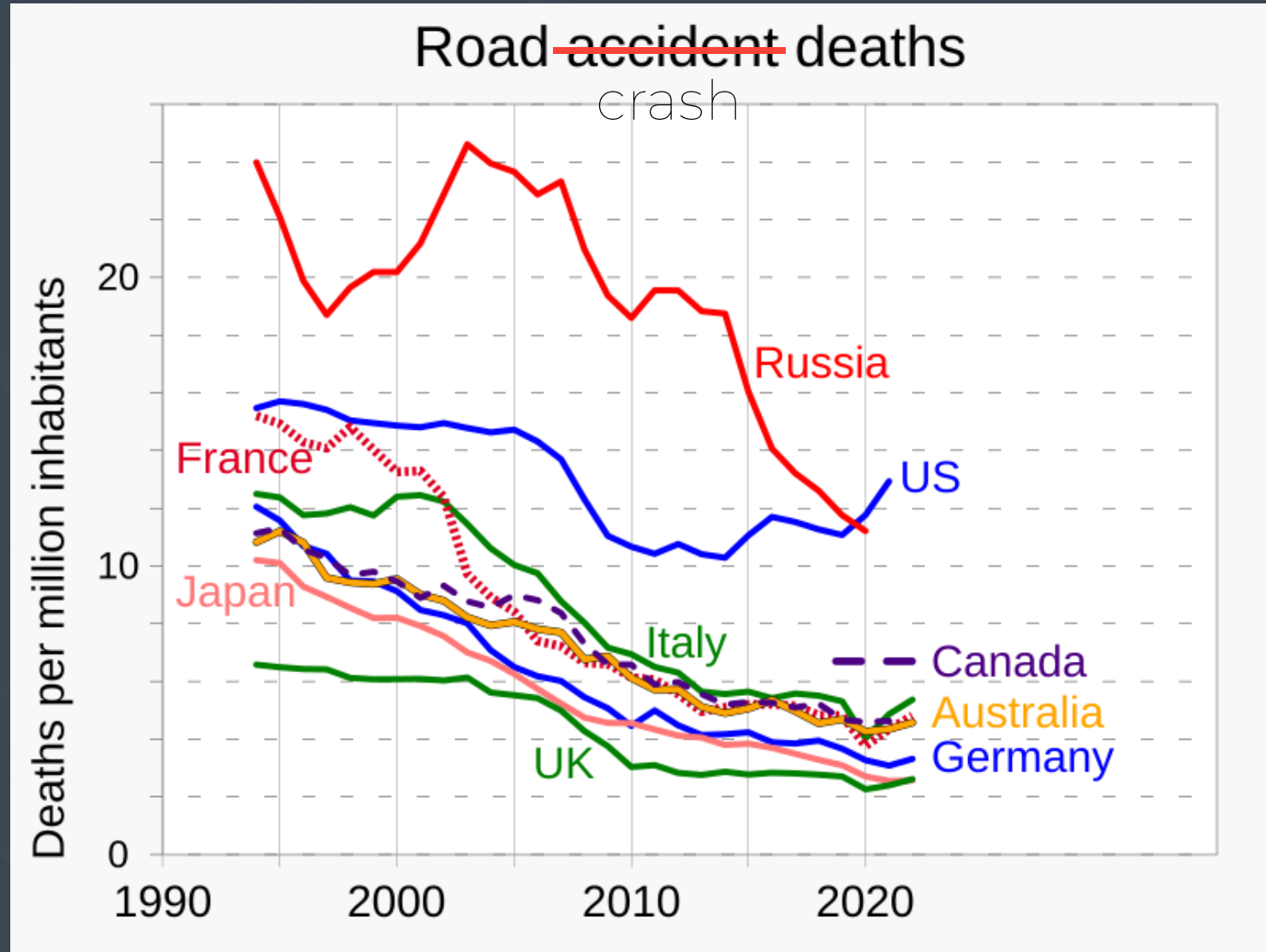
- Our industry has been tracking crashes and fatalities for decades
- Crashes in the US peaked at 56,278 in 1972
- 32,479 traffic fatalities in 2011 (lowest since 1949)
- 14.97% reduction between 1979 and 2005



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Thag Anderson becomes the first fatality as a result of falling asleep at the wheel.

Peer Countries



NHTSA – Traffic Fatalities – New Mexico

		Crash Year									
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fatalities	Total	311	386	298	405	380	392	425	398	483	466
	Rural	215	248	176	229	195	232	241	209	260	264
		69%	64%	59%	57%	51%	59%	57%	53%	54%	57%
	Urban	96	133	119	172	180	158	184	186	220	202
		31%	34%	40%	42%	47%	40%	43%	47%	46%	43%
	Unknown	0	5	3	4	5	2	0	3	3	0
0%		1%	1%	1%	1%	1%	0%	1%	1%	0%	

Rural fatalities have consistently exceeded urban fatalities

Speeds

- Excessive speed was a factor in 28% of fatal crashes
 - 29% Speeding drivers in fatal crashes were unlicensed
 - 38% of drivers in fatal speeding crashes had a BAC>0.08g/dL
 - 52% of speeding drivers were not restrained (seat belts)
- 87% of speeding-related traffic fatalities occurred on non-interstate roadways
- New Mexico had 5th highest percentage of speeding-related fatalities in 2022 (40%)

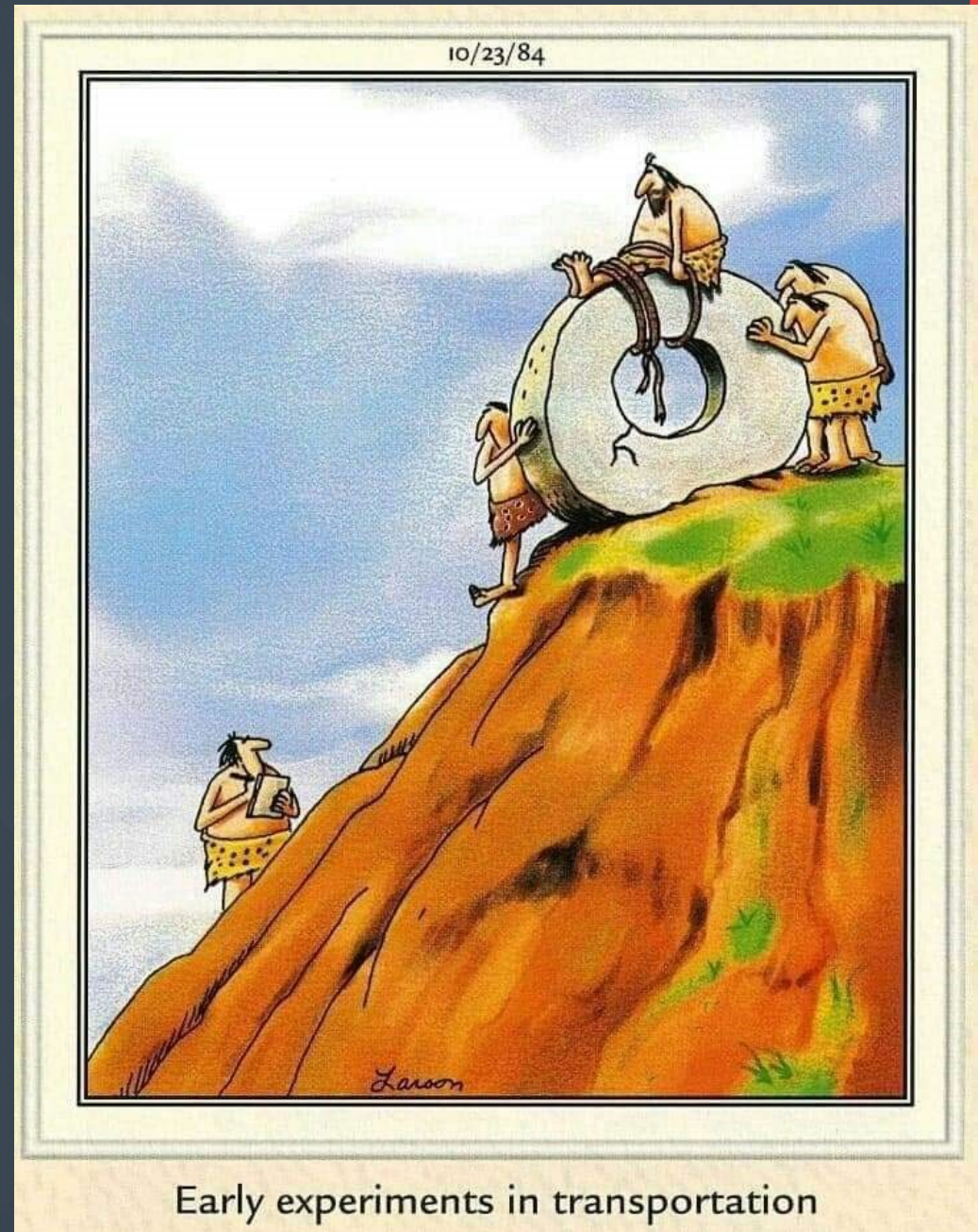


Where We Have Been



Past Efforts

- Traffic safety efforts are not new



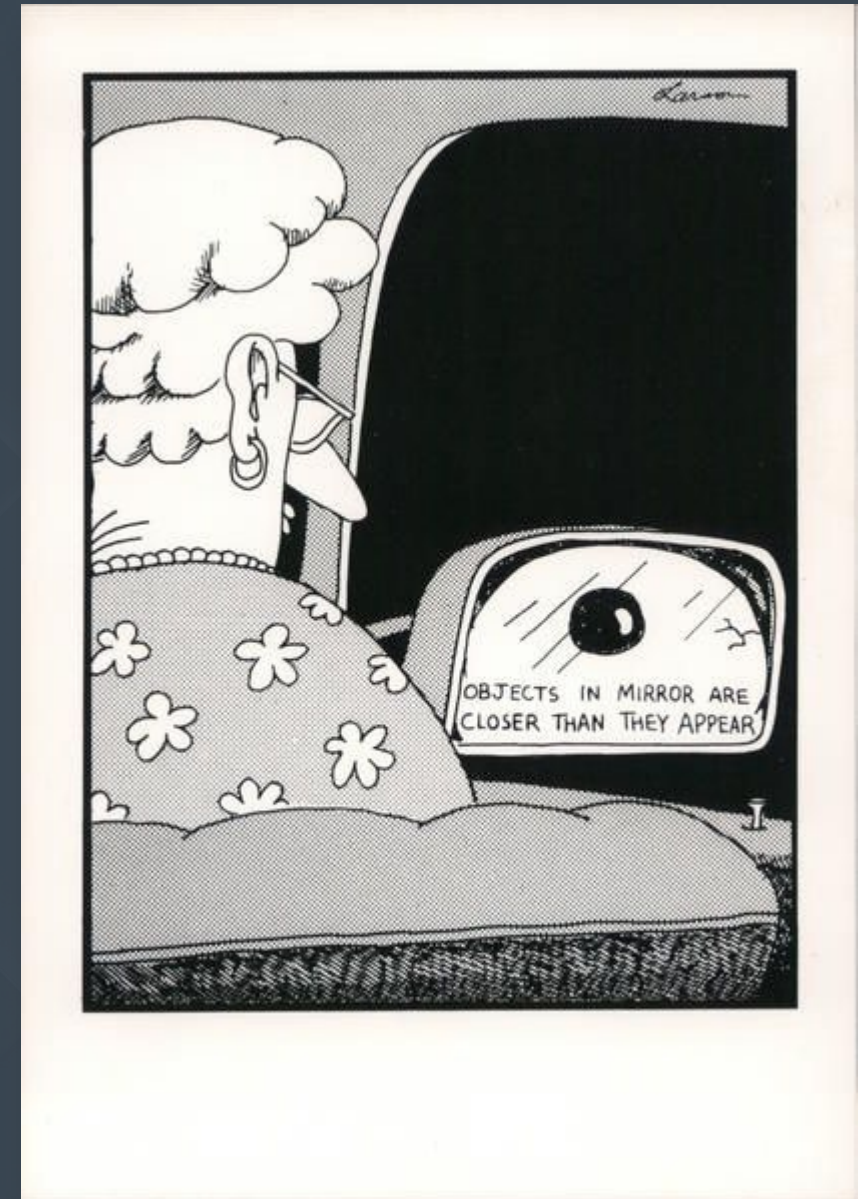
Engineering Efforts

- Oldest found evidence of road markings are from Mexico, around 1600
 - Centerline was made out of lighter-colored stones set in the road
- 1911, Wayne County, Michigan has earliest recorded painted centerline
- First rural centerline was in 1917 - Route 492, Marquette County, MI
- First electric traffic signal – August 5, 1914, Cleveland, Ohio



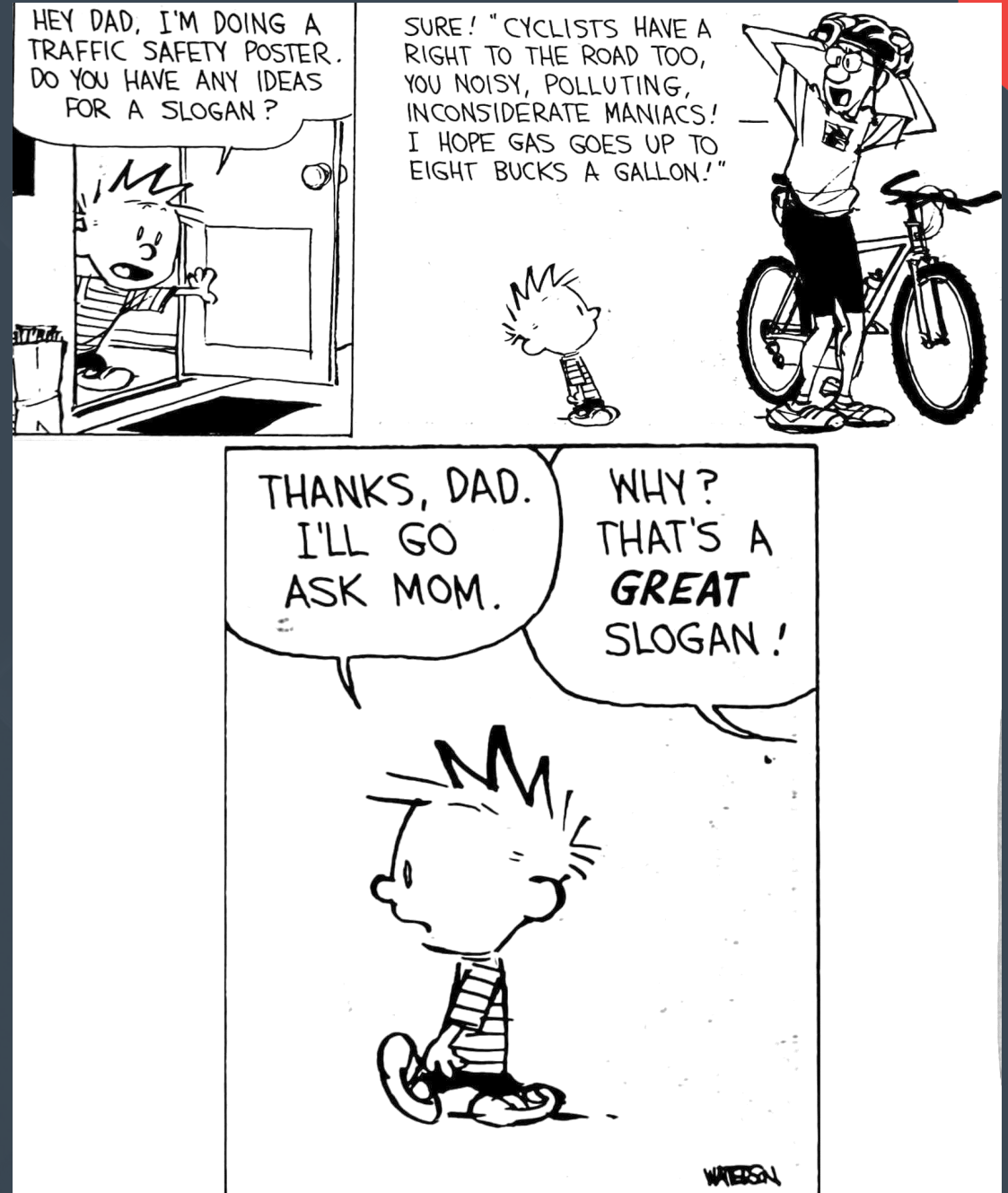
Vehicle Efforts

- Passenger side mirrors were optional through 1970s
- 1959, three-point seat belt invented by Volvo
 - Gave away the invention royalty-free!
- Nationally mandated in 1968
- 2018, all new vehicles in US required to have rear-view cameras



Education / Outreach

- Dec. 15, 1954 – President Eisenhower challenged the public to go one full day without accidents
- “Click It or Ticket” program conceived in North Carolina, 1993





Where We Can Go



What Now?

- Vision Zero
- Safe System Approach
- Data-Driven Analyses
- New Countermeasures
- Call to Action

National Roadway Safety Strategy

- Safe System Approach
- Allies in Action

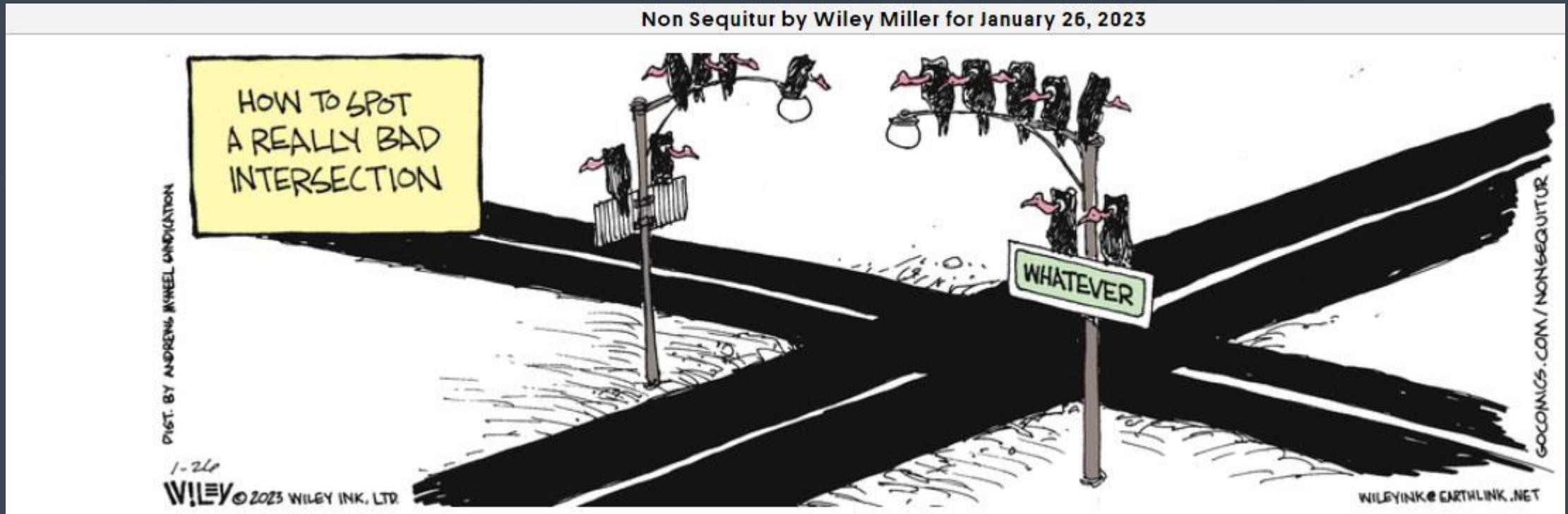
NMDOT actions:

- Finalize its Complete Streets Strategic Plan
- Complete the collection of spatially referenced bicycle and pedestrian infrastructure data across New Mexico
- Draw on its Vulnerable Road User Safety Assessment data collection to inform project selection
- Continue to implement road safety audits
- Utilize its Highway Safety Improvement Program funds to finance the installation of three pedestrian hybrid beacons in high-risk locations.



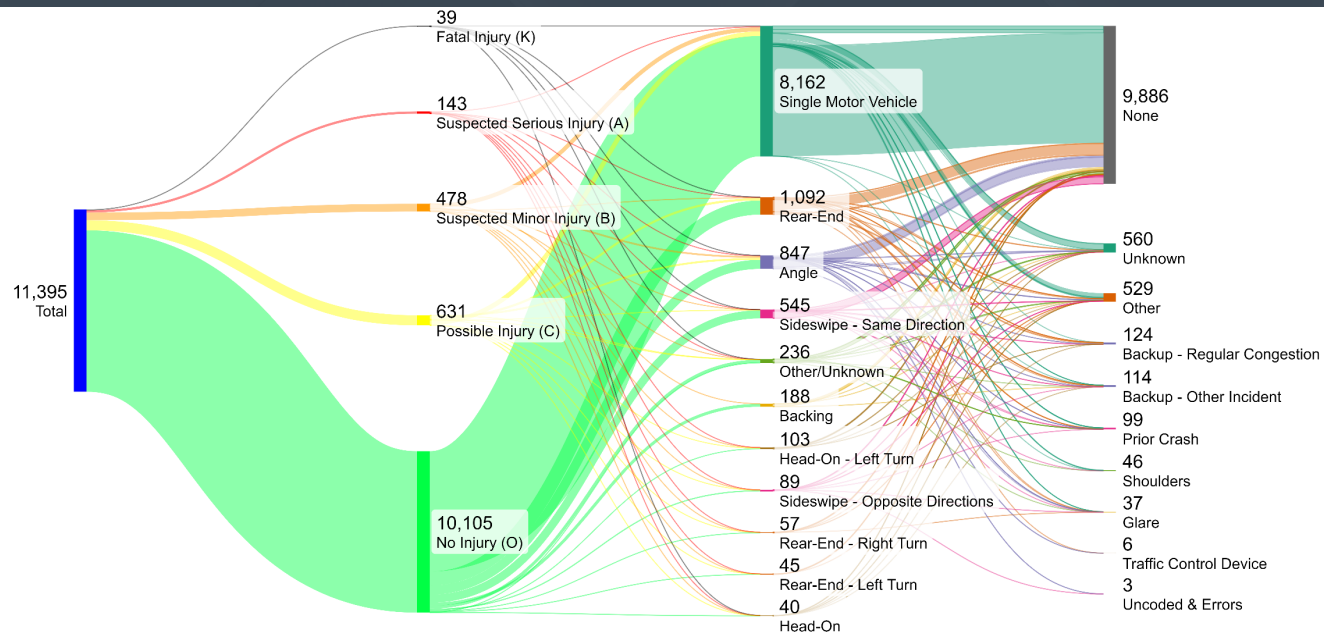
Identify your needs

- Rural crashes are rarely concentrated
- **Types** of locations that are correlated with crashes
 - Curves, steep grades, unlit intersections, etc.



Identify your needs

- Over-represented crash types
- Citation data, behaviors of concern



Stay away from this guy



Spread the effects

- Systemic, low-cost countermeasures
 - Generally quicker to implement, lower unit cost

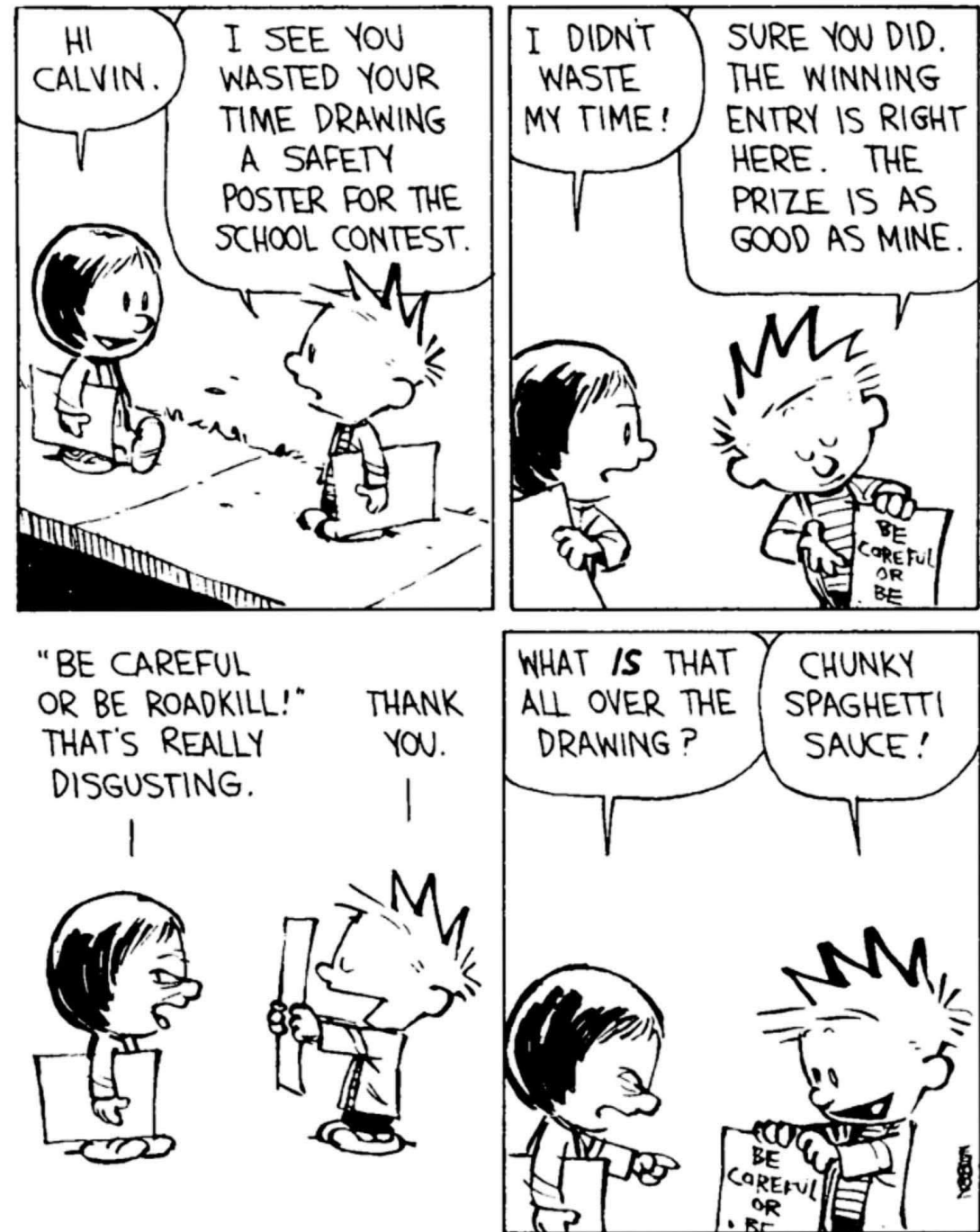


Vs.



Coordinate Efforts

- DOT / First Responder / SHSO coordination
 - Evacuation routing / access planning
 - Emergency signing / Digital Message Signs
- Fleet operators
 - Trucking, schools, etc. – safe driving pledges
- Schools
 - Safe behaviors for students – walking/driving safe



Double-Down on What Works

- Proven Safety Countermeasures
- Focus on at-risk populations, behaviors, etc.
 - e.g. Youth, Tribal Members, Seat Belt usage
- NHTSA Countermeasures That Work



Reducing Risk for Tribal Communities

Countermeasures That Work: An Introductory Resource For Rural Communities

OFFICE OF SAFETY
Proven Safety Countermeasures

SPEED MANAGEMENT

- Speed Safety Cameras
- Variable Speed Limits
- Appropriate Speed Limits for All Road Users

ROADWAY DEPARTURE

- Wider Edge Lines
- Enhanced Delineation for Horizontal Curves
- Longitudinal Rumble Strips and Stripes on Two-Lane Roads
- SafetyEdgeSM
- Roadside Design Improvements at Curves
- Median Barriers

INTERSECTIONS

- Backplates with Retroreflective Borders
- Corridor Access Management
- Dedicated Left- and Right-Turn Lanes at Intersections
- Reduced Left-Turn Conflict Intersections
- Roundabouts
- Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections
- Yellow Change Intervals

PEDESTRIANS/BICYCLES

- Crosswalk Visibility Enhancements
- Bicycle Lanes
- Rectangular Rapid Flashing Beacons (RRFB)
- Leading Pedestrian Interval
- Medians and Pedestrian Refuge Islands in Urban and Suburban Areas
- Pedestrian Hybrid Beacons
- Road Diets (Roadway Reconfiguration)
- Walkways

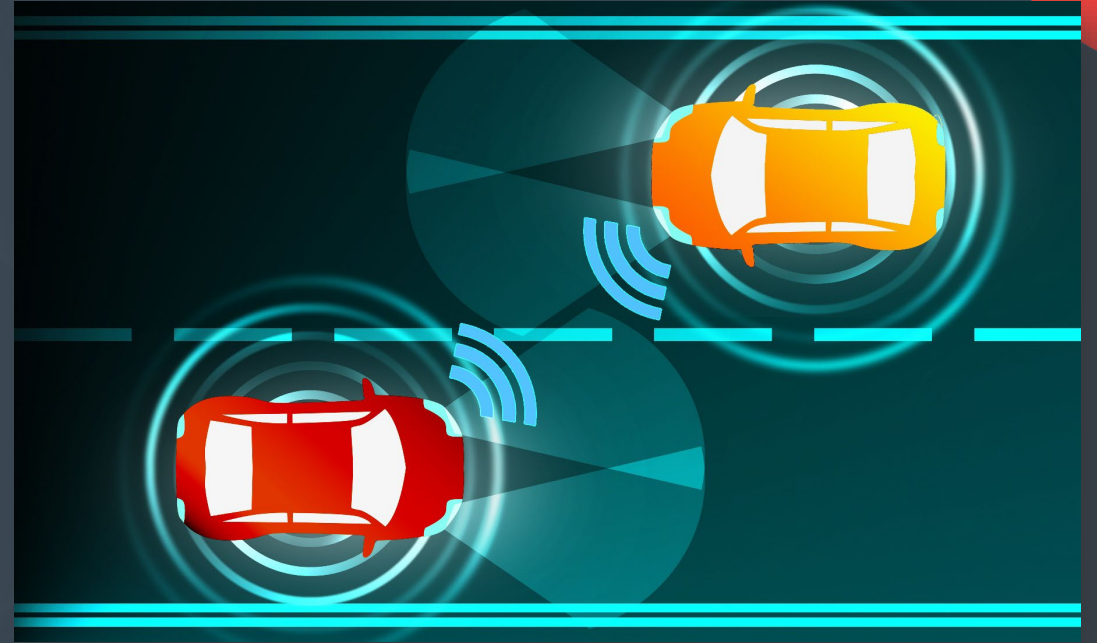
CROSSCUTTING

- Pavement Friction Management
- Lighting
- Local Road Safety Plans
- Road Safety Audit

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Future Technology

- V2X Roadmap
- C/AV technologies
- Machine Learning / AI



Remember...

- These are not just numbers, they are **PEOPLE**



This story is mine.



Thank you"

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