# Safety and Operations Conference

Gilberto De Leon P.E. Deputy Division Administrator Tennessee Division

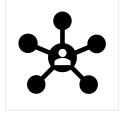
U.S. Department of Transportation Federal Highway Administration

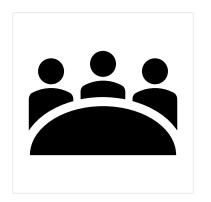
A SAFE SYSTEM IS HOW WE GET THERE https://safety.fhwa.dot.gov/



#### **Tennessee Division Office**

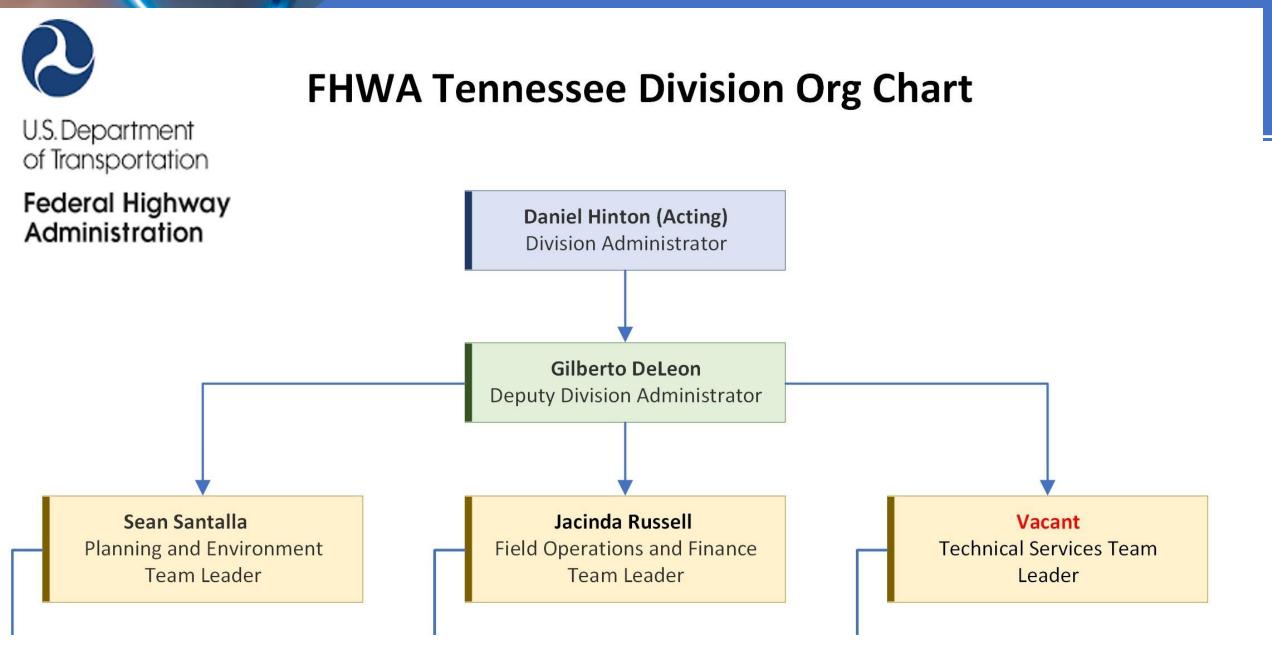
- Get to know our teams
  - Leadership Team
  - Planning and Environment
    - Planning, Environment, ROW and Civil Rights
  - Field Operations and Finance
    - Area Engineers and Finance Staff
  - Technical Services
    - Safety, Bridge, Operations, PMA and ITS



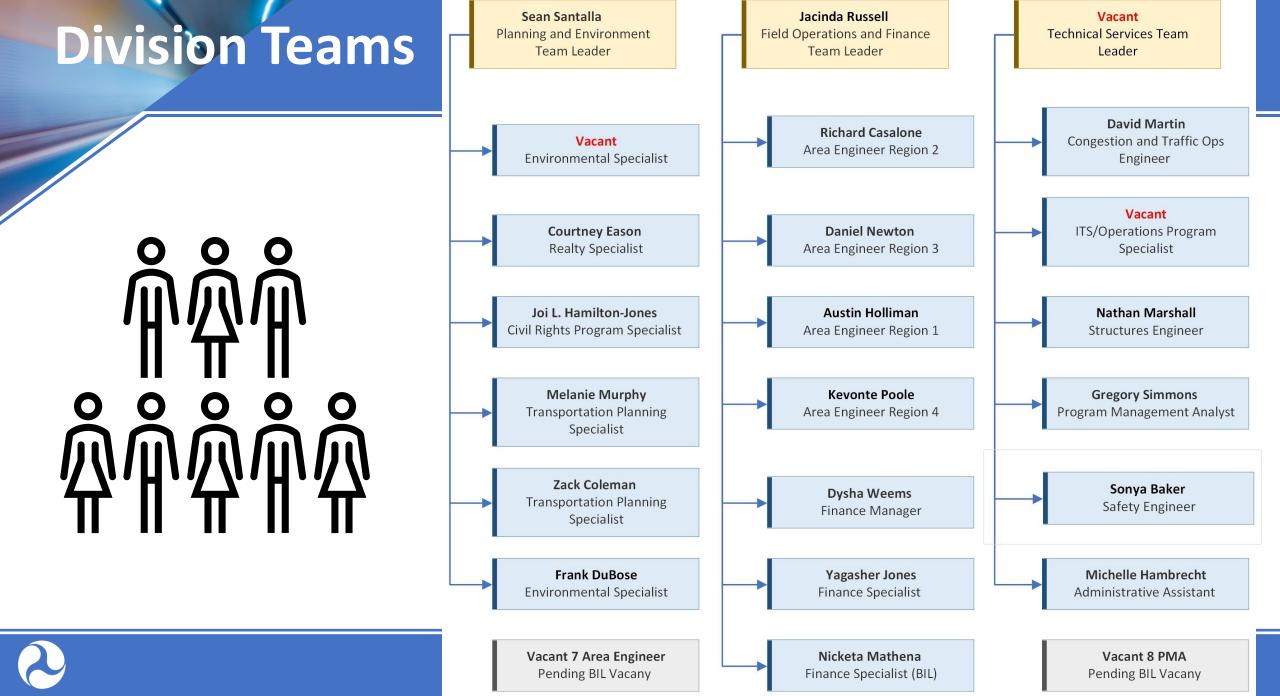


https://www.fhwa.dot.gov/tndiv/staff.cfm

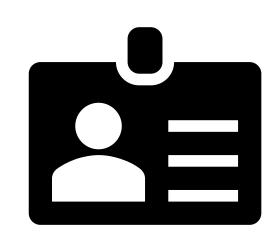








#### **TN Division Safety Engineer**



Sonya Baker Safety Engineer Sonya.baker@dot.gov 615-781-5788



#### Vacancies – TL and Ops

- Technical Servicers Team Leader Vacancy
  - https://www.usajobs.gov/job/758996800
- ITS / Operations Engineer
  - To be posted on USAJOBS



#### What does this number represent?

# 42,795

#### Number of fatalities estimated by NHTSA in 2022 Daily average of 117 fatalities



#### How many fatalities in TN?

# 1,137 in 2022 (TDOT Safety Dashboard)

https://www.tn.gov/safety/stats/dashboards/trafficfatality.html 1,157 so far in 2023 – 1.8% increase from 2022



#### How do we think differently?

• Should we be thinking about how much funding the project will cost? Or how many lives we will save?

• Is the priority to improve traffic flow and capacity? Or to reduce fatalities and serious injuries?

• How do we promote safe driving habits to create a safer environment?



### Safety Request from the Administrator

- Administrator Bhatt requested the States to increase the deployment of **Proven Safety Countermeasures**
- Safety is our shared number one priority
- Each PSC is **based on research** that shows dramatic safety gains when installed
- Few countermeasures are actually implemented



#### **Proven Safety Countermeasures**

- The Proven Safety Countermeasure Initiative is a collection of 28 countermeasures and strategies effective in reducing roadway fatalities and serious injuries on our Nation's highways.
- Focus areas include speed management, roadway departure, intersections, pedestrians/bicyclists, and crosscutting countermeasures that apply across categories

# MAKING OUR<br/>ROADS SAFEROne<br/>Countermeasure<br/>at a Time





Safety Benefits: Wider edge lines can reduce crashes up to:

37% for non-intersection, fatal and injury crashes on rural, two-lane roads.<sup>2</sup>

22% for fatal and injury crashes on rural freeways.<sup>3</sup>

Benefit Cost Ratio 25:1 for fatal and serious injury crashes on two-lane rural roads.<sup>4</sup>

#### **Proven Safety Countermeasures**

- Wider Edge Lines
  - Wider edge lines increase drivers' perception of the edge of the travel lane and can provide a safety benefit to all facility types
  - Wider edge lines are most effective in reducing crashes on rural two-lane highways



Safety Benefits: 11% reduction in fatal and injury crashes.<sup>2</sup>

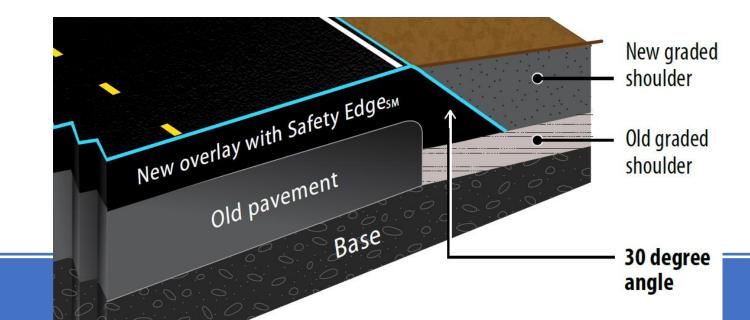
21% reduction in run-off-road crashes.<sup>2</sup>

19% reduction in head-on crashes.<sup>2</sup>

Benefit-Cost Ratio Range<sup>3</sup> 700:1 to 1,500:1

# Safety Edge

- The Safety Edge shapes the edge of the pavement at approximately 30 degrees from the pavement cross slope during the paving process
- Rural road crashes involving edge drop-offs are 2-4 times more likely to include a fatality than other crashes on similar roads





Safety Benefits: Sidewalks 65-89% reduction in crashes involving

pedestrians walking along roadways.<sup>3</sup>

Paved Shoulders 71% reduction in crashes involving pedestrians walking along roadways.<sup>3</sup>

### Pedestrian walkways / Sidewalks

• We have more than 6,200 pedestrian fatalities and 75,000 pedestrian injuries occurring in roadway crashes annually



#### Safe systems approach



#### Principles of the Safe Systems Approach

- Death and Serious Injuries are Unacceptable
- Humans Make Mistakes
- Humans Are Vulnerable
- Responsibility is Shared
- Safety is Proactive
- Redundancy is Crucial

https://www.transportation.gov/NRSS/SafeSystem



#### Safe Systems Approach

- Objectives of a Safe System Approach
  - Safer People
    - Encourage safe, responsible driving and behavior
  - Safer Roads
    - Design roadway environments to mitigate human mistakes
  - Safer Vehicles
    - Expand the availability of vehicle systems and features that help to prevent crashes
  - Safer Speeds
    - Promote safer speeds in all roadway environments
  - Post-Crash Care



#### How do we think differently?

• Should we be thinking about how much funding the project will cost? Or how many lives we will save?

• Is the priority to improve traffic flow and capacity? Or to reduce fatalities and serious injuries?

• How do we promote safe driving habits to create a safer environment?



#### **Questions?**



Gilberto DeLeon DDA Gilberto.DeLeon@dot.gov 615-426-3214



U.S. Department of Transportation Federal Highway Administration Sonya Baker Safety Engineer Sonya.baker@dot.gov 615-781-5788

