Office of Analysis, Research & Technology
Current and Upcoming Activities

March 23, 2021

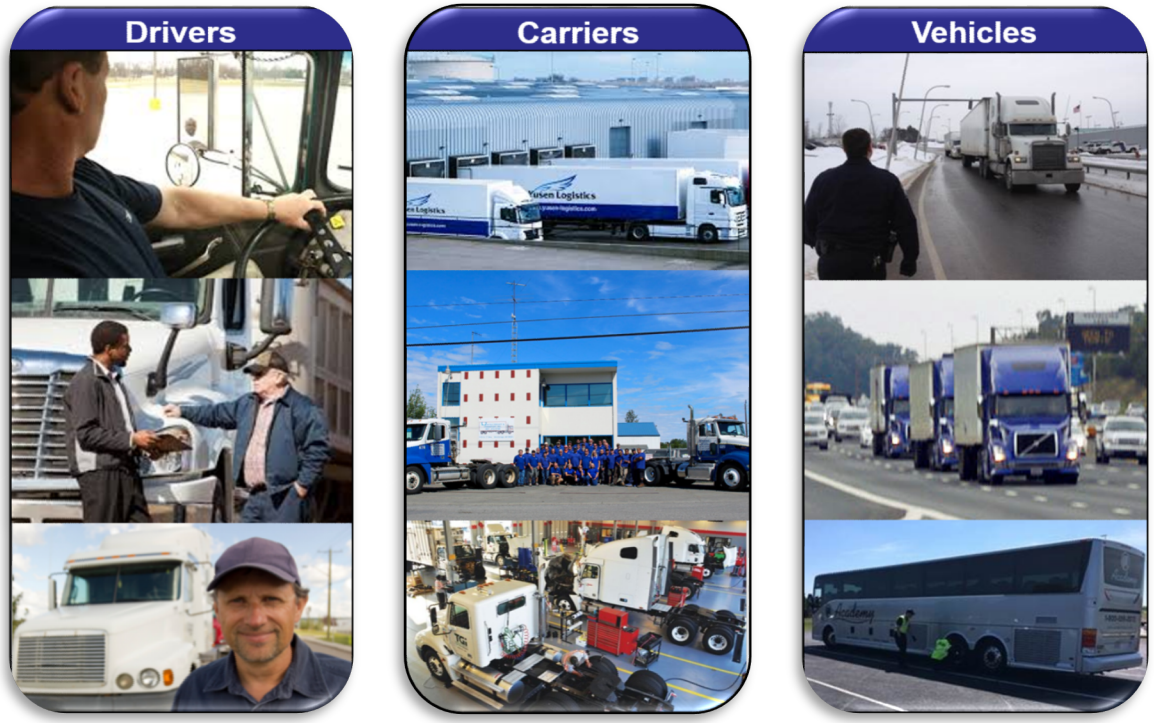
U.S. Department of Transportation
Federal Motor Carrier Safety Administration

Mission:

to save lives and reduce crashes and injuries by advancing large truck and bus safety through collaboration, education, research, technology, and compliance.

ART Focus Areas

- Driver Safety
- Carrier Safety
- Vehicle Safety
- Automated and Connected CMVs
- Maximize Communication and Collaboration



Analysis Division

- Purpose: to provide timely, accurate, and complete data, statistics and analysis in support of FMCSA programs, State partners, the motor carrier industry, and the public.
- Priority Projects:
  - Large Truck Crash Causal Factors Study
  - Completing the Picture of Crashes
  - Raising the Bar on State Safety Data Quality Performance Measures
  - Producing Annual Publications/Studies
    - 2022 Pocket Guide to Large Truck and Bus Statistics
    - 2020 Large Truck and Bus Crash Facts
    - 2021 Drug and Alcohol Testing Survey Results
    - 2019 Carrier Intervention Effectiveness Model

Selected Analysis Division Projects

- **Large Truck Crash Causal Factors Study (LTCCFS)**
  - $30M multi-year project to collect data on fatal crashes for trucks > 26k lbs
  - Study is in the planning stages, with data collection expected in 2023
- **Completing the Picture of Crashes**
  - Supplement FMCSA crash data sets with additional sources of information.
  - Continuing development of Data Visualization Tool with new data sources.
- **Raising the Bar on State Safety Data Quality Performance Measures**
  - Change the standards for what constitutes good/fair/poor levels of data
  - Planning a preview for FMCSA and State partners in September 2022

Research Division

- Purpose: to reduce CMV-involved crashes and enhance the safety and efficiency of CMV operations by conducting systematic studies directed toward fuller scientific discovery, knowledge, and understanding that contribute to a safe and secure commercial transportation system.
- Priority Projects
  - Safe Driver Apprenticeship Pilot Program
  - Impact of Driver Compensation on Safety and Retention
  - Impact of Detention Time on Safety and Operations
  - FMCSA Data Repository
  - Investigating the Safety of CMV Operation by Deaf and Hard of Hearing Drivers

Selected Research Division Projects

- **Safe Driver Apprenticeship Pilot Program (SDAP)** https://www.fmcsa.dot.gov/safedriver
  - Required by Section 23022 of the Bipartisan Infrastructure Law
  - Pilot program to determine the safety impacts of an apprenticeship program for drivers 18-20
- **"Driver Compensation Study" and "Detention Time Study"**
  - Driver Compensation Study: Contract with TRB to understand the impact of various methods of driver compensation on safety and driver retention
  - Detention Time Study: Determine the frequency and severity of detention time and the impact on safety and operations
- **FMCSA Data Repository**
  - Develop, maintain, and operate the Repository with raw AND public use data sets
  - Launched in February 2022: https://fmcsadatarepository.vtti.vt.edu/
- **Investigating the Safety of CMV Operation by Deaf and Hard of Hearing Drivers**
  - Evaluate the safety of deaf and hard of hearing CMV drivers and identify safe and effective methods for training and testing
  - Conducting literature review and survey of state and international regulations. Project concludes in March 2023

Technology Division

- Purpose: to identify, develop, test, and deploy innovative technologies to improve the safety and security of commercial motor vehicles.
- Priority Projects
  - Automated CMV Evaluation (ACE) Program
  - Advanced Driver Assistance Systems (ADAS)
  - Innovative Technology Deployment (ITD) Grants

Advanced Driver Assistance Systems
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Selected Technology Division Projects

- **ACE Program: Inspections, Demonstrations, and Evaluations**
  - Demonstrate, test, and evaluate ADS-equipped CMV inspection procedures, methods, and technologies recommended by CVSA's Enforcement and Industry Modernization Committee Work Group.
- **ACE Program: Emergency Response and Work Zone Research**
  - Present findings on how automated vehicles impact current practices regarding emergency response and work zones.
- **ADAS Crash Safety Analyses via Onboard Monitoring Systems (OBMS) data**
  - Perform empirical analyses on OBMS (e.g. dash cam) data sets from trucks with and without ADAS to determine the safety impact of ADAS.
- **Hazard Triangles for Automated Trucking Applications**
  - SBIR project to develop technology-based alternatives for use by ADS-equipped CMVs in order to comply with Section 392.22 of the FMCSRs.

Questions

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