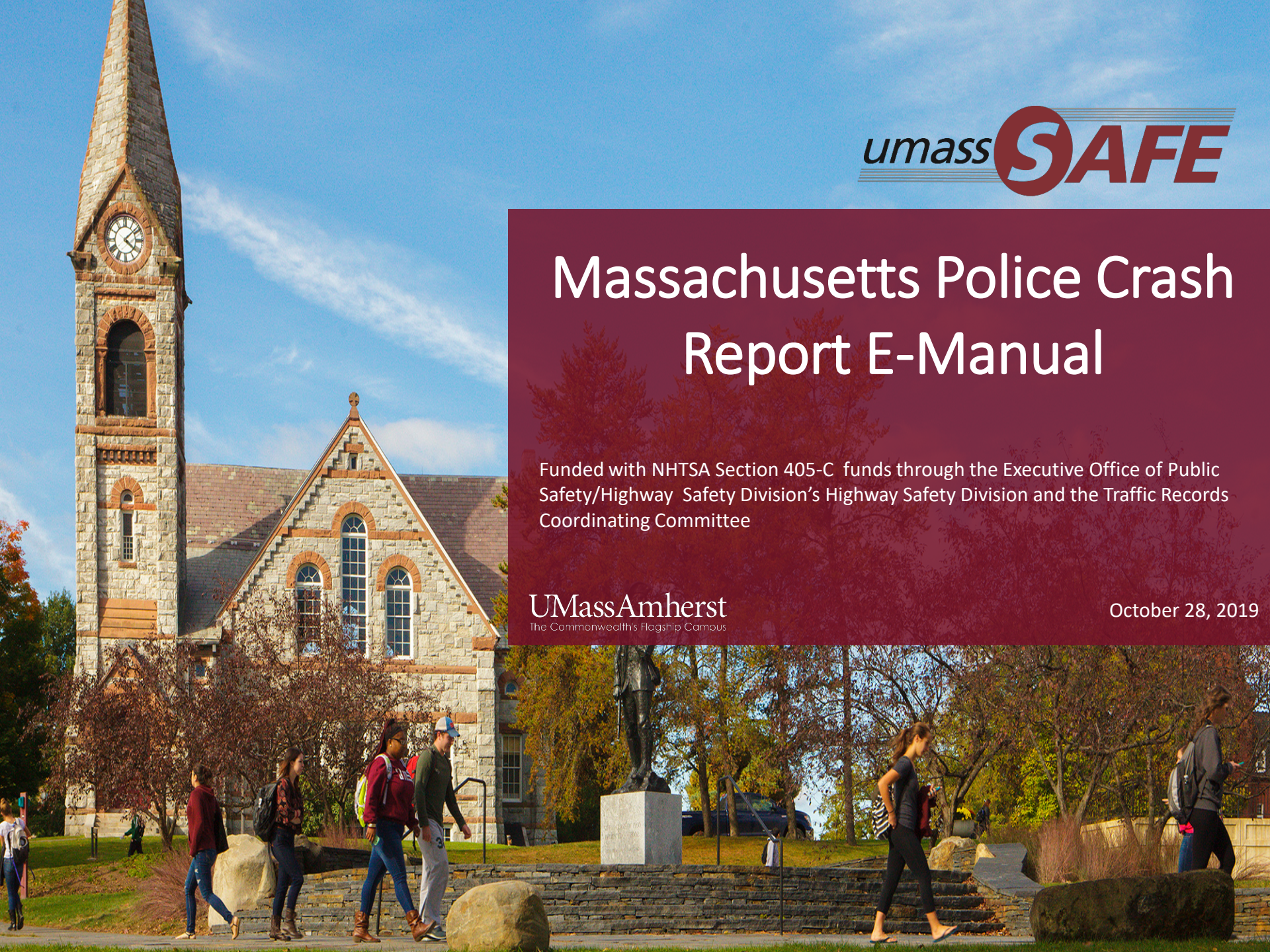


umass SAFE

Massachusetts Police Crash Report E-Manual

Funded with NHTSA Section 405-C funds through the Executive Office of Public Safety/Highway Safety Division's Highway Safety Division and the Traffic Records Coordinating Committee

UMassAmherst
The Commonwealth's Flagship Campus

October 28, 2019

umass SAFE
Traffic Safety Research Program

Multidisciplinary traffic safety research program

Housed in …

- University of Massachusetts Amherst
  - College of Engineering
    - Civil & Environmental Engineering
      - University of Massachusetts Transportation Center

About UMassSafe

Support highway safety through combined approach

Scientific data-driven problem identification, program design, and evaluation

+

Traditional highway safety practices (engineering, enforcement & education)

Project Experience

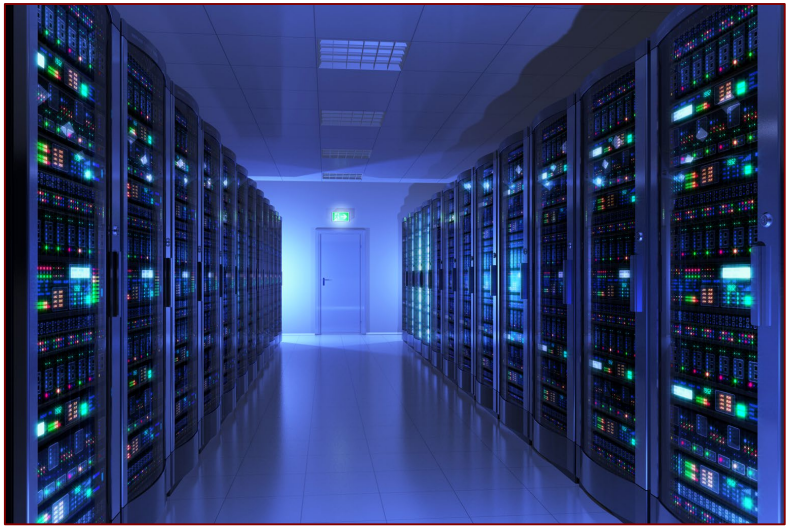
- Strategic Planning Development
- Safety Data Warehousing
- Online Data Access Development

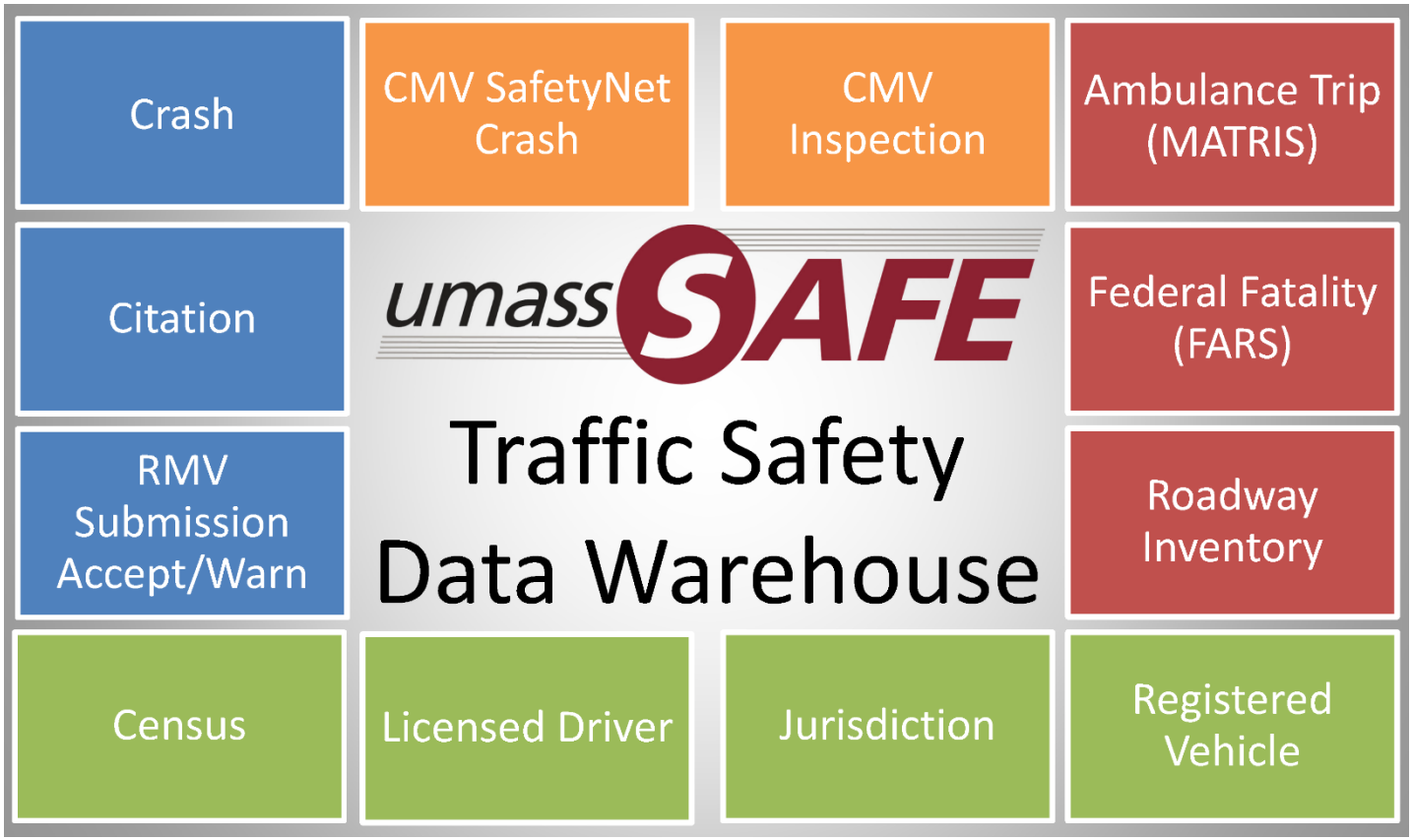
- Data Analysis and Technical Assistance
- Crash Mapping and GIS Analysis
- Field Data Collection and Analysis

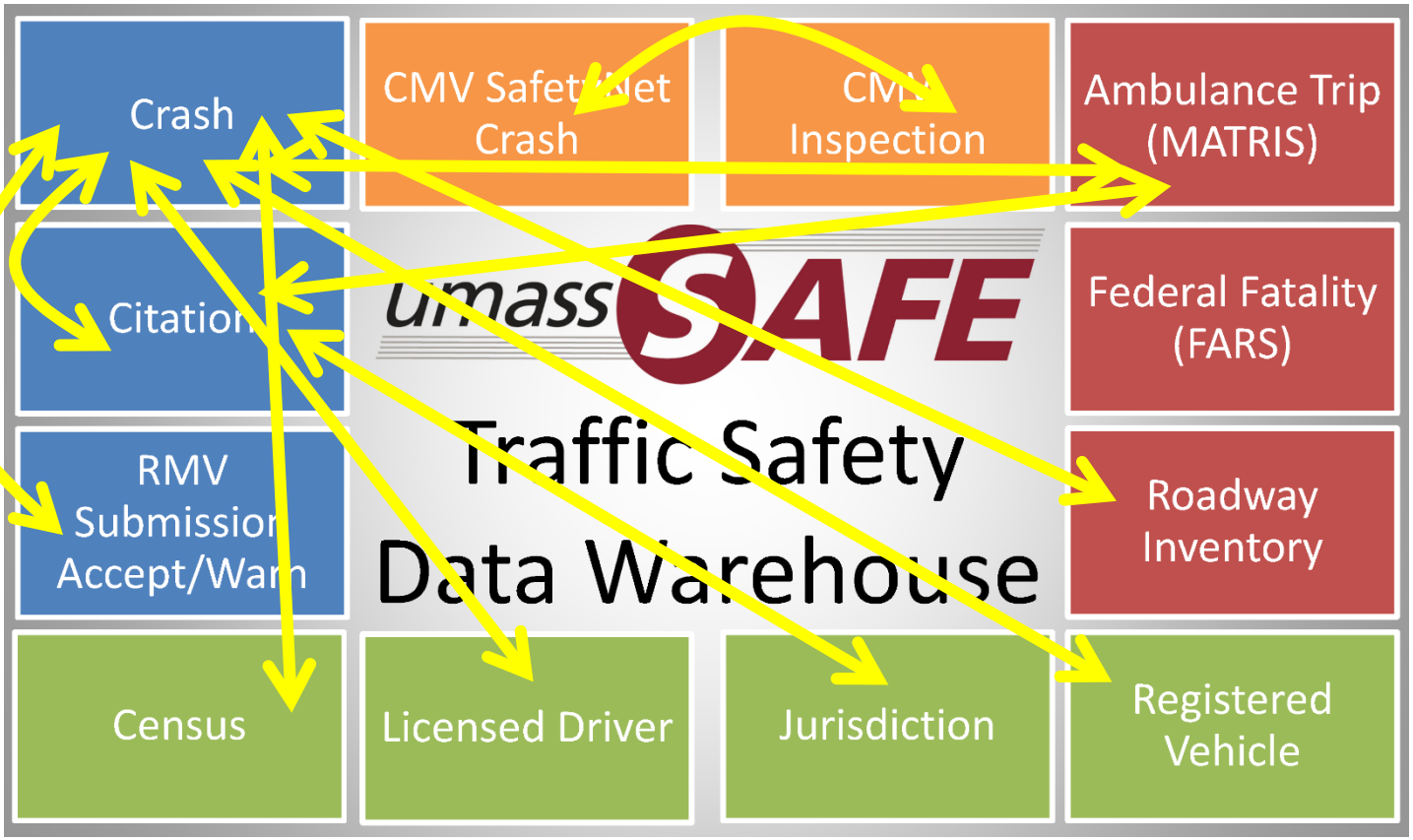
- Data Quality Analysis and Improvement
- Curriculum & Online Training Creation
- Qualitative Analysis

UMassSafe Traffic Safety Data Warehouse

- Serves as a central repository for data from many sources
- Creates a location to provide historical view of events
- Serves as a decision support system
- Datasets – 12 datasets as well as linked datasets, 2002-2019
- Traffic Safety Technical Assistance Center (TS/TAC)




Crash
CMV SafetyNet Crash
CMV Inspection
Ambulance Trip (MATRIS)
Citation
umass SAFE
Federal Fatality (FARS)
RMV Submission Accept/Warn
Traffic Safety Data Warehouse
Roadway Inventory
Census
Licensed Driver
Jurisdiction
Registered Vehicle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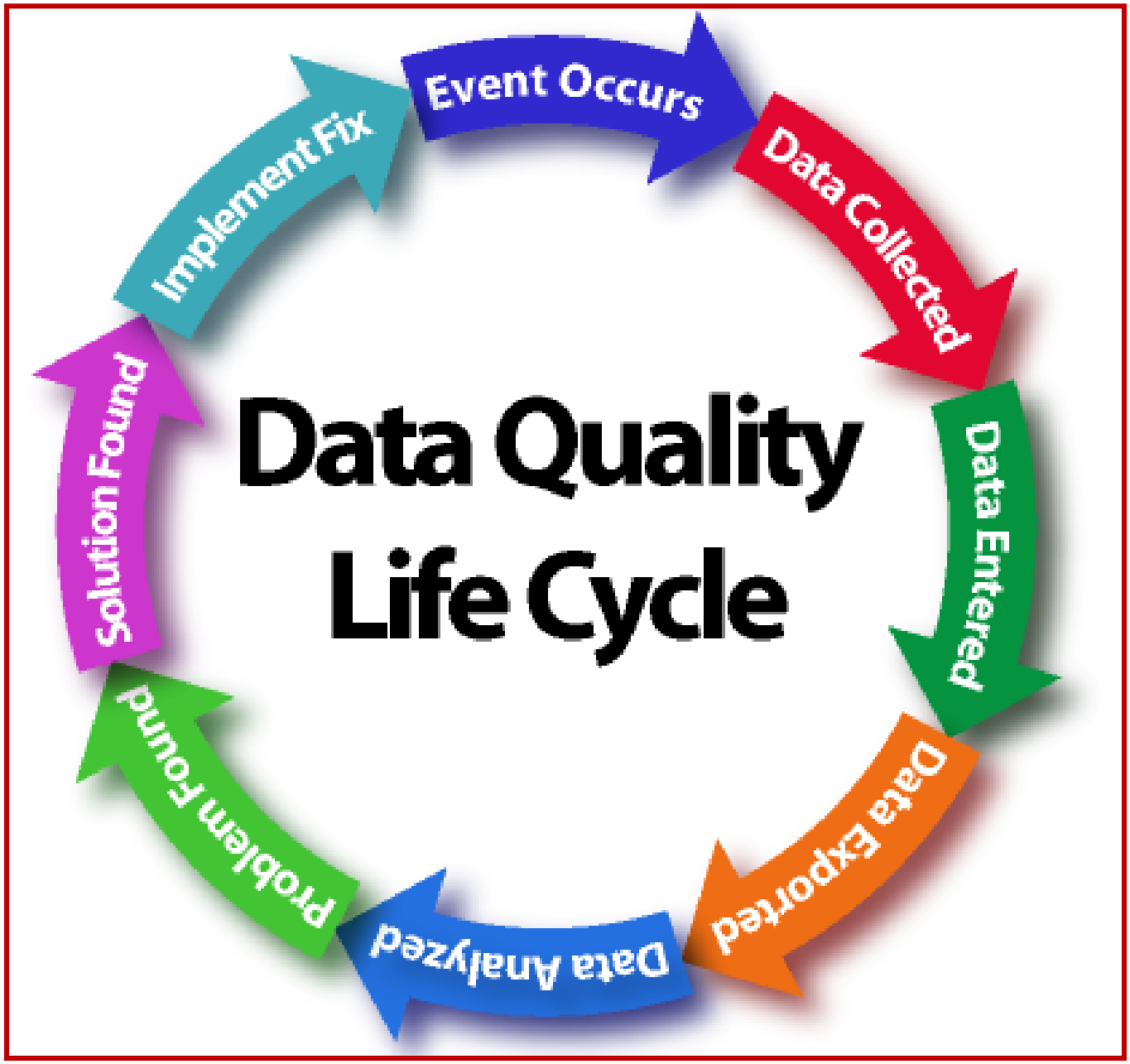

Data Quality
Life Cycle
Event Occurs
Data Collected
Data Entered
Data Exported
Data Analyzed
Problem Found
Solution Found
Implement Fix

Goal
To improve crash data quality

Project Partners

MassDOT RMV Division: Development, Feedback, Dissemination, Promotion and Updates

MassDOT Highway Division: Location Methods

EOPSS HSD: Dissemination, Promotion, Updates

MA State Police: Dissemination

MA State Police Commercial Vehicle Enforcement Section: Truck and Bus Section

MA Chiefs of Police Association: Feedback and Dissemination

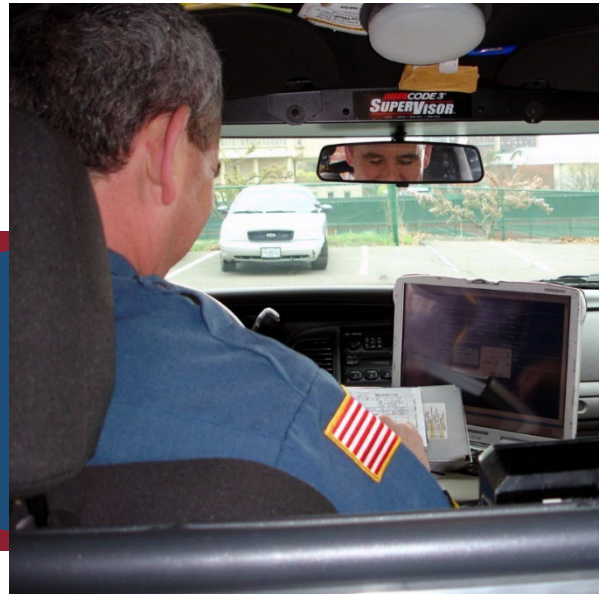
Massachusetts

Law Enforcement CRASH REPORT E-MANUAL

- To improve the collection of crash data
- Online resource and data dictionary for law enforcement and other users of transportation safety data.
- Detailed information about the crash reporting process from start to finish.

Content

- Why we investigate crashes and how crash data is used
- General crash report information
- Data dictionary
- Specific information on new crash report fields
- Directions for each section of crash report (person, crash, location, and diagram)



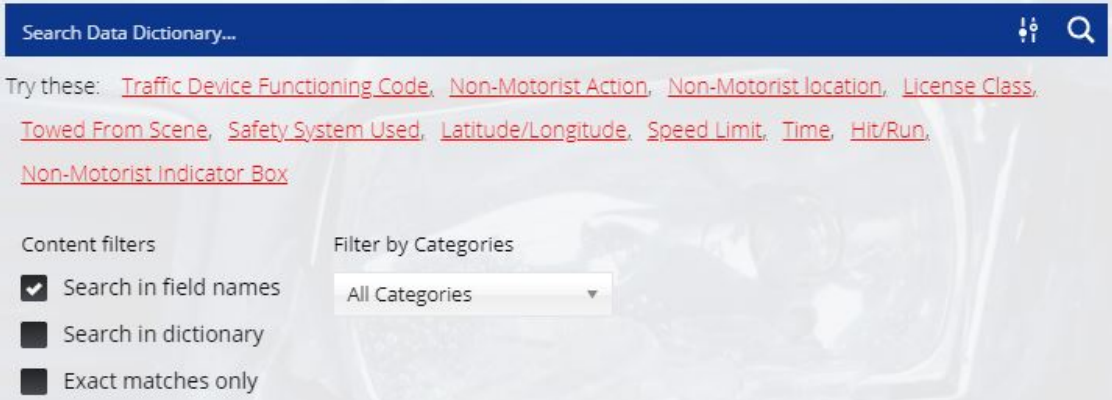
Law Enforcement

CRASH REPORT E-MANUAL

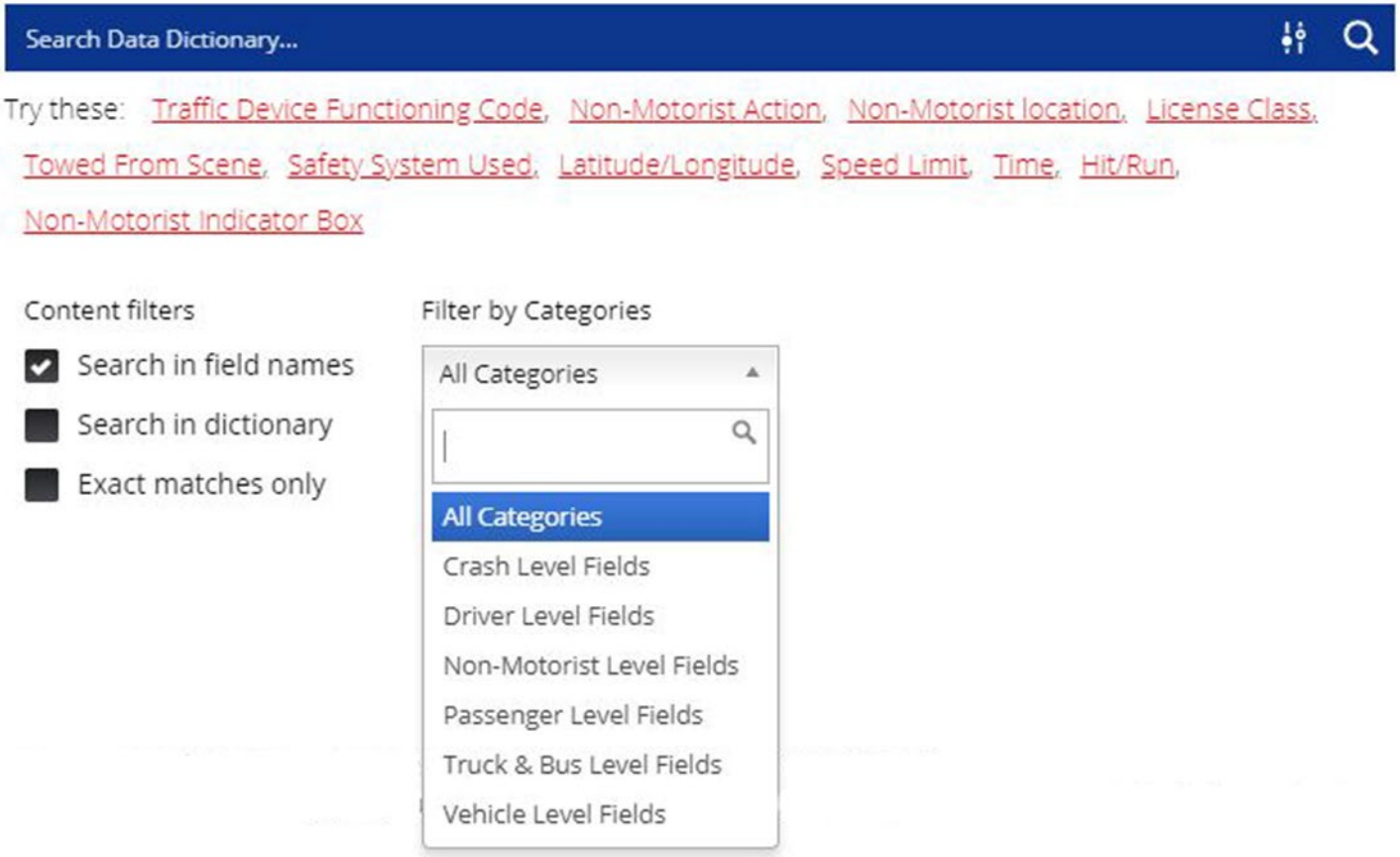
https://masscrashreportmanual.com/

Massachusetts Law Enforcement Crash Report E-Manual

Search the Data Dictionary



This project was implemented by UMassSafe with input from the Executive Office of Public Safety and Security/Office of Grants and Research/Highway Safety Division, MassDOT Highway Division and RMV Division, the Massachusetts State Police, and various local police representatives. The project was undertaken with Section 405-c funding from the National Highway Traffic Safety Administration, provided through the Massachusetts Executive Office of Public Safety and Security and the Massachusetts Traffic Record Coordinating Committee.


Search Data Dictionary...
Try these: Traffic Device Functioning Code, Non-Motorist Action, Non-Motorist location, License Class, Towed From Scene, Safety System Used, Latitude/Longitude, Speed Limit, Time, Hit/Run, Non-Motorist Indicator Box
Content filters
Search in field names
Search in dictionary
Exact matches only
Filter by Categories
All Categories
All Categories
Crash Level Fields
Driver Level Fields
Non-Motorist Level Fields
Passenger Level Fields
Truck & Bus Level Fields
Vehicle Level Fields

Trafficway Description

Instructions:

Select the characteristic that best describes the design of the road on which this vehicle was traveling.

Definition:

Indicates whether the trafficway for this vehicle is divided and whether it serves one-way or two-way traffic. A divided trafficway is one in which roadways for travel in opposite directions are physically separated by a median.

Rationale:

This element is used for classifying crashes as well as identifying the environment of a particular crash. It is important for guiding future trafficway design and traffic control.

Code	Attribute	Definition	Example
1	Two-Way, Not Divided	This attribute is used whenever there is no median. Generally, medians are not designed to legally carry traffic. Although gores separate roadways, and traffic islands (associated with channels) separate travel lanes, neither is involved in the determination of trafficway division.	
2	Two-Way, Divided, Unprotected Medium	This attribute is used for two-way trafficways that are physically divided by an unprotected median (e.g., painted median > 4ft., vegetation, gravel, trees, water, embankments and ravines that separate a trafficway). Raised curbed medians do not constitute a "positive barrier" by themselves and would be included here.	
3	Two-Way, Divided, Positive Medium Barrier	This attribute is used whenever the traffic is physically divided and the division is protected by any concrete, metal, or other type of longitudinal barrier (i.e. all manufactured barriers). For underpass support structures and bridge rails acting as a barrier, use this attribute. "Traffic barrier" refers to a physical structure such as a guardrail, concrete safety barrier, cable barrier, or other structure designed to mitigate or prevent cross-median travel. Therefore, trees, curbing, rumble strips, drainage depressions, etc. are not considered traffic barriers.	
4	One-Way, Not Divided	This attribute is used whenever the trafficway is undivided and traffic flows in one direction (e.g., one-way streets).	
99	Unknown	If this attribute is used, an explanation in the narrative is recommended.	

FAQ

Is a guardrail or jersey barrier considered a positive median?

Yes.

Accuracy Checks

- If Sequence of Events indicates 'cross median/centerline', then the Trafficway Description should not be 'one-way'.

Data Quality Audit Results

B

Report Type	Acceptable		Inconsistent		Invalid		Empty	
Local Police (electronic)	336	95.5%	11	3.1%	1	0.3%	4	1.1%
Local Police (paper)	344	95.3%	6	1.7%	–	–	11	3.0%
State Police (electronic)	322	96.4%	11	3.3%	–	–	1	0.3%
Total	1002	95.7%	28	2.7%	1	0.1%	16	1.5%

Crash Level Fields

Crash

The fields listed below are categorized as 'crash-level'. This designation indicates that instead of representing a specific person or vehicle, the information gathered represents the crash as a whole. 'Crash-level' fields include environmental factors, such as lighting and weather; location attributes, including community and GPS coordinates; and events leading to the cause of the crash. 'Crash-level' reporting is an integral part of crash data collection and helps law enforcement and other safety professionals to create programming and enforcement that is targeted toward the most common types of crashes and in high-crash areas.

City/Town	Number of Vehicles	School Bus Related
Crash Location	Police Type	Speed Limit
Date	Property Damage	Time
First Harmful Event	Property Type Code	Traffic Control Device Type
First Harmful Event Location	Reporting Officer	Traffic Device Functioning Code
Latitude/Longitude	Road Contributing Circumstances	Trafficway Description
Light Conditions	Road Surface	Weather Conditions
Manner of Collision	Roadway Intersection Type	Work Zone Related Code

Intersection | Off-Intersection | Address | Mile Marker | Exit Ramp

Required Fields

- Name of Roadway and/or Route Number
- Direction of Roadway/Route
- Name of Intersecting Roadway and/or Route Number
- Direction of Intersecting Roadway/Route

Guidelines

- Use AT INTERSECTION method if the crash occurred within 30 feet of an intersection of two or more public roadways/streets.
- Identify roadways by both the roads' names and the route numbers (if applicable).
- If there is a roadway that intersects with another roadway multiple times within a city/town, please identify any other intersecting streets to help accurately pinpoint the crash location.
- Place names (such as corner names, squares, etc.) that are known only to local residents may be used as landmarks, but not in lieu of the correct street names.
- Please identify any landmarks by street address (i.e. Dunkin Donuts at 123 Main St.).

Example

AT INTERSECTION :	< LOCATION >
116	SUNDERLAND RD
Route # Direction	Name of Roadway/Street
	SUGARLOAF ST
Route # Direction	Name of Roadway/Street
Route # Direction	Name of Roadway/Street

Crash Data Audit Results

A statewide 2017 Crash Data Audit found the Intersection Method to be the location method with the highest percentage of crashes that could be adequately geolocated (81 percent). The rates of successful geolocation were much higher for local police than State Police. However, State Police rarely used this location method. The Direction was often missing on reports using the Intersection Method. The Narrative and/or Diagram, while useful for a multitude of other applications, cannot be used for automatic geolocating of crashes.

The common inconsistency on local police reports was whether the crash occurred in an intersection or in close proximity to an intersection.

Online Crash Reporting Resources

LOCATION METHODS

There are four primary methods that can be used to document the crash location: Intersection, Address, Mile Marker or Exit. When completing the location section, choose the method that will best represent the crash location. See examples and learn the guidelines here.

More Information

DATA IMPORTANCE

The purpose of crash data is to help decision-makers understand the nature, causes, and injury outcomes of crashes. This information provides context for the design of strategies and interventions that will reduce crashes and their consequences.

More Information

PDF MANUAL

Don't always have access to internet, or would you like a hard copy for your cruiser? Use the PDF Data Dictionary file.

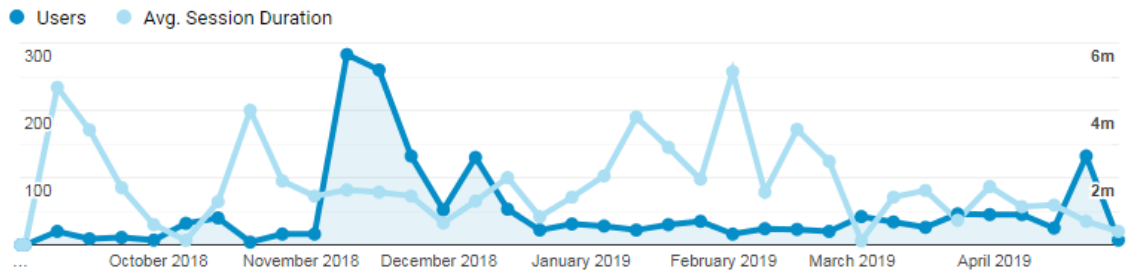
Open PDF

Special thanks to primary content sources from MMUCC 5th Edition/NHTSA and ConnDOT Crash Investigator Guide.

Google Analytics – Tracking Use

Top Page Views

- Manner of Collision
- Injury Status
- Trafficway Description
- Driver Contributing Code
- GVWR/GCWR
- Cargo Body Type



City	Users	Sessions	Bounce Rate	Pages / Session	Avg. Session Duration
Ashburn	292	292	100%	1.00	0.00
Boston	96	104	77%	1.80	66.21
New York	65	71	82%	1.58	58.61
Revere	32	36	81%	1.42	11.50
East Bridgewater	26	30	47%	4.30	322.13
Amherst	25	139	45%	2.81	253.76
Hartford	18	20	80%	1.45	51.80
Somerville	18	23	70%	1.83	107.52
Lexington	16	19	47%	2.84	221.05
Quincy	16	18	61%	2.33	114.17
New Haven	14	14	71%	1.57	89.43
Braintree	14	15	87%	1.20	119.00
Natick	14	17	24%	4.24	245.35
Cambridge	13	20	45%	4.20	293.55
Worcester	13	13	69%	1.69	76.23
Melrose	12	13	62%	1.77	26.23
New Bedford	12	12	50%	3.75	195.42
Pittsfield	12	13	69%	2.38	74.77
Providence	11	12	75%	1.42	80.67
Andover	11	11	45%	2.82	143.36
Barnstable	10	12	67%	2.00	48.67
Holyoke	10	11	36%	2.55	45.73
Peabody	10	15	47%	5.33	165.53
Total	1621	1931	71%	2.15	94.03

Phase 2

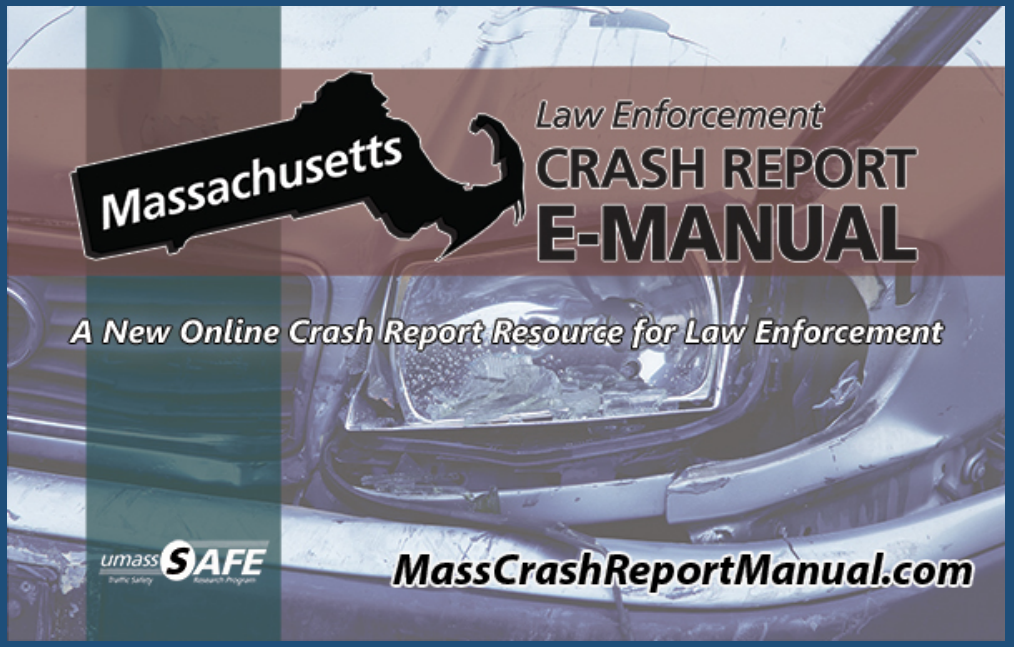
Soliciting Feedback

- A survey and/or key informant interviews
- Google Analytics

Expansion and Updates

- RMV's system edit checks and validation rules
- Traffic Records News page

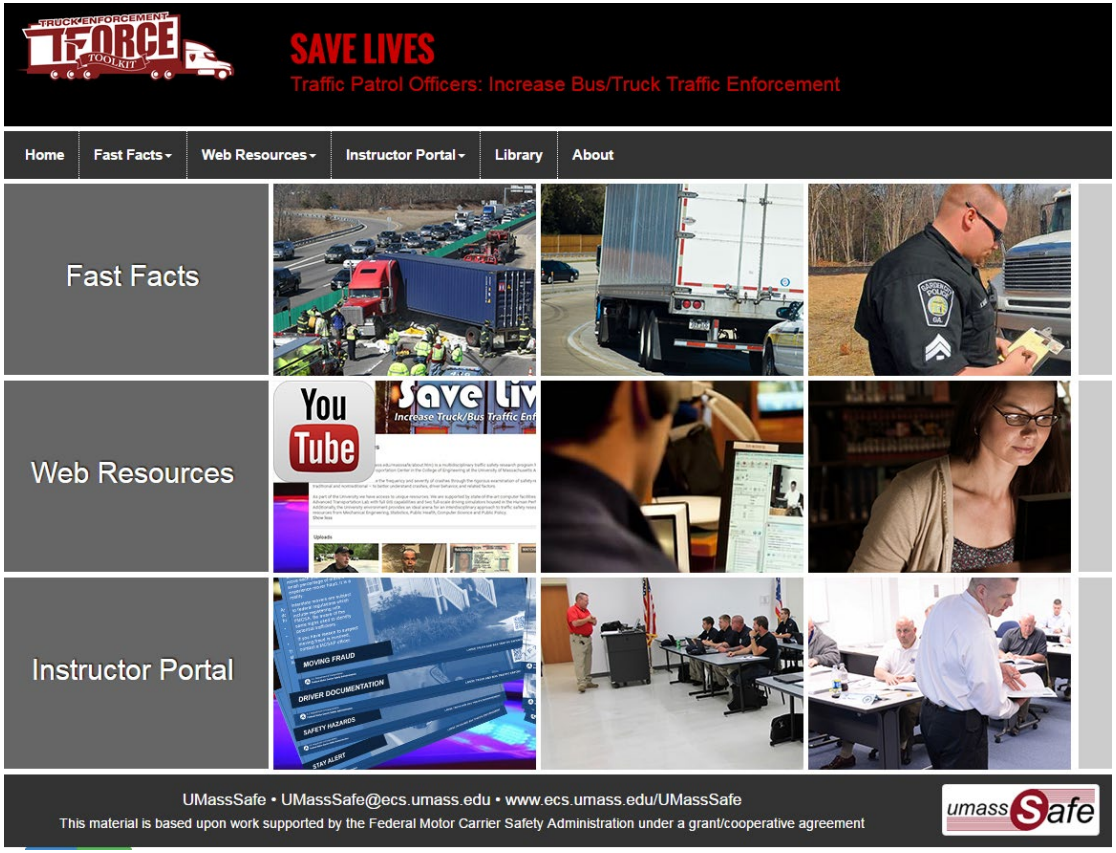
Further Promotion



T-Force Toolkit

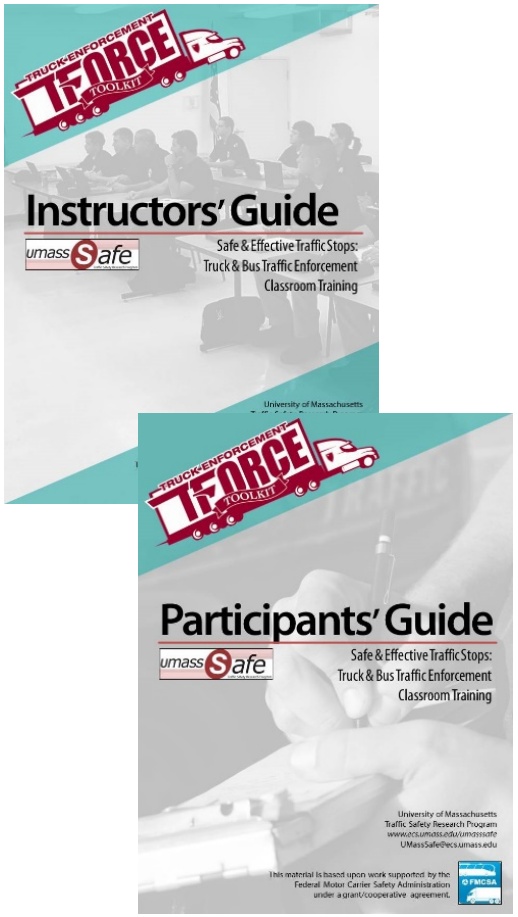
One stop shopping for all commercial truck/bus traffic enforcement resources

www.tforcetoolkit.com



T-Force Toolkit Classroom Training

- Traffic stop from start to finish
- Similarities and Differences between traffic enforcement with trucks/buses and passenger cars
  - Officer Safety
  - Choosing the location
  - Approaching a large truck/bus
  - Visibility issues
  - Commercial Drivers License
  - Assisting the truck in re-entering traffic



Questions & Contact Information

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Robin Riessman - riessman@ecs.umass.edu

University of Massachusetts

www.umasssafe.org

(413) 577 1035

umassSafe

Traffic Safety Research Program

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