U.S. Department of Transportation

National Highway Traffic Safety Administration

Federal Highway Administration

NAGHSR

FINAL

Model Minimum Uniform Crash Criteria (MMUCC)

August 1998

TABLE OF CONTENTS

Executive Summary

Statewide motor vehicle traffic crash data systems provide the basic information necessary for effective highway and traffic safety efforts at any level of government -- local, state or federal. State crash data are used to perform problem identification, establish goals and performance measures, determine progress of specific programs, and support the development and evaluation of highway and vehicle safety countermeasures.

Unfortunately, the use of state crash data is often hindered by the lack of uniformity between and within states. While standards exist for collection of crash data, their use and application is inconsistent. For example, states do not collect the same information on their crash reporting forms, crash and data element definitions may differ, similar data elements may have different meanings, and/or others may have the same meanings but different values. Inconsistent data within a state, or between multiple states, can result in incorrect interpretations, thus limiting the usefulness of the information.

Many states have recently revised their crash data reporting form, and others are now in the process of doing so. Several states, during their revision process, have contacted National Highway Traffic Safety Administration (NHTSA) or Federal Highway Administration (FHWA) seeking guidance. At national meetings, there have been informal requests for national guidelines for states to use when revising crash forms or working with software vendors. The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 required DOT to “ensure national uniform data” and to “establish minimum criteria” for reporting of highway deaths and injuries. Renewal of this legislation as the 1998 Transportation Equity Act for the Twenty First Century (TEA21) provides incentives for states developing plans that include implementation of model data elements approved by the Secretary of Transportation.

NHTSA and FHWA are cooperating with the National Association of Governors’ Highway Safety Representatives (NAGHSR) to develop model minimum uniform crash criteria (MMUCC). Development of MMUCC has been structured to obtain maximum input from all sectors of the highway safety community. Over a 20 month period, a straw model was proposed and then revised according to feedback received at meetings, via the Web, email, phone, mail, etc. before producing this final version.

MMUCC includes 75 minimum data elements that need to be collected by police at the crash scene and an additional 38 data elements that can be derived (11 data elements) from those that are collected at the scene or obtained by linking (27 data elements) to other data files, e.g., roadway data, injury data, etc. The total 113 data elements represent a “model” data set which can be expanded as necessary to meet a state’s specific needs.

A study of the feasibility of implementing MMUCC evaluated the data elements collected by the 17 states providing crash data to NHTSA for its State Data System. These seventeen states are currently collecting about 60% of the 75 MMUCC data elements needing to be collected by police at the scene. And on average, they collect an additional 28 data elements not included in MMUCC.

Implementation of MMUCC will facilitate improved crash data for highway and traffic safety, injury control and public health purposes at the local, state, and federal levels.

Acknowledgments

The development of the ***Model Minimum Uniform Crash Criteria (MMUCC)*** is being sponsored by the National Association of Governors' Highway Safety Representatives, the National Highway Traffic Safety Administration, and the Federal Highway Administration. Numerous state and local agencies and organizations have contributed staff to its development. The participation of the following individuals is recognized:

Frank Carlile	Florida Department of Transportation
David Dickens	Charleston West Virginia Police
Doug Donscheski	Nebraska State Patrol
Scott Falb	Iowa Department of Transportation
Rosa Gill	North Carolina State Division of Motor Vehicles
Dick Harmon	Iowa Bureau of Emergency Medical Services
Don Hillis	Missouri Department of Transportation
David Kleppe	North Dakota State Highway Patrol
David Lawrence	California Center for Childhood Injury Prevention
Lance Mathess	Ohio State Patrol
Creighton Miller	South Dakota Office of Accident Records
David Mosley	Virginia Department of Motor Vehicles
Phil Salzberg	Washington Traffic Safety Commission
Manu Shah	Maryland State Highway Administration
James Templeton	Texas Department of Public Safety
Robert Thompson	Iowa Governor's Traffic Safety Bureau
John Watson	New York State Department of Transportation
Ralph Craft	Federal Highway Administration
Dennis Flemons	National Highway Traffic Safety Administration
Carl Hayden	Federal Highway Administration
Mike Griffith	Federal Highway Administration
Janet Johnson	National Highway Traffic Safety Administration
Sandy Johnson	National Highway Traffic Safety Administration
Janet Kumer	Federal Highway Administration
Tina Morgan	National Highway Traffic Safety Administration
Ed Milton	National Highway Traffic Safety Administration
Jack Oates	National Highway Traffic Safety Administration
Barbara Rhea	National Highway Traffic Safety Administration
Jackie Schraf	National Highway Traffic Safety Administration
David Sleet	Centers for Disease Control and Prevention
Carol Tan Esse	Federal Highway Administration
Dennis Utter	National Highway Traffic Safety Administration
David Bozak	InfoGroup, Inc.
Noel Bufe	Northwestern University Traffic Institute
Charles Compton	University of Michigan Transportation Research Institute
Barbara Harsha	National Association of Governors' Highway Safety Reps
Roy Lucke	Northwestern University Traffic Institute
Gary March	March & Associates
Matt Snyder	International Association of Chiefs of Police
Richard Pain	Transportation Research Board
Charles Peltier	International Association of Chiefs of Police
Patricia Waller	University of Michigan Transportation Research Institute

Introduction

Background

A motor vehicle crash report describes characteristics of the crash, the vehicles and people (drivers, injured and uninjured occupants and injured pedestrians and bicyclists) involved. On it, the police officer also records the results of his or her investigation of the crash. By using evidence found at the scene, and by interviewing participants and witnesses the investigating officer may answer such questions as:

- "In what directions were the involved vehicles and pedestrians moving prior to impact?";
- "What occurred at the time of impact?"; and,
- "What factors may have contributed to the crash?"

Data recorded on crash reports are computerized into a central, electronic crash data file at the state level. These statewide motor vehicle crash databases provide the basic information necessary for developing effective highway and traffic safety programs. Data from state crash data systems are used by local, state and federal agencies to:

- identify and prioritize highway and traffic safety problem areas;
- assess the effectiveness of laws and programs intended to reduce the frequency and severity of motor vehicle crashes and injuries; and,
- assess the relationship between vehicle and highway characteristics, crash propensity, and injury severity to support either the development of countermeasures or their evaluation.

At the Federal level individual crash reports also provide the basis for national crash information systems, either as the sampling frame or as a source of data. Data from these national systems are utilized in highway safety decision making by agencies at all levels of government.

Problem

Crash data lack uniformity between the states and, often, within a state. Beyond a basic set of data elements, states collect different data elements on their crash reports. Where there are similar data elements, they often have different meanings. Or the names may be the same but the attribute values vary. Within a state, local police may interpret crash element definitions differently when documenting the same type of event. Reporting thresholds for the types of traffic crash for which data are collected also differ among states and may even be implemented differently within a state.

Lack of uniform reporting makes the use and comparison of state crash data difficult. Different elements and definitions within a state can result in inconsistent data and,

potentially, incorrect interpretations of data. The same is true when states have different reporting requirements and dissimilar crash data elements -- accurate comparisons are difficult, and states can not draw on the experience of other states. When analyses use two or more state crash data files, results have to be examined closely to ensure that they are not due to differences in the data collected and coded by these states.

Existing national standards for collecting information about motor vehicle traffic crashes are not uniformly implemented. The *Manual on Classification of Motor Vehicle Traffic Accidents,* the American National Standards Institute (ANSI) Standard D16.1, was developed to "promote uniformity and comparability of motor vehicle accident statistics." ANSI Standard D20.1, *Data Element Dictionary for Traffic Records Systems,* was developed to "provide a common set of coding instructions for data elements related to highway safety..." While the goals of these standards are to promote uniformity and comparability of motor vehicle traffic crash statistics, their use and application is inconsistent between states and even within a state.

States periodically revise their crash reporting forms. In a recent study conducted by the National Association of Governors' Highway Safety Representatives (NAGHSR) for the National Highway Traffic Safety Administration (NHTSA), eighteen states indicated that they are in the process of revising their crash reporting form, or will revise it, by 2000. Many are being spurred to do so by the availability of new technologies such as hand-held computers for data collection. Others are doing so in an effort to reduce the reporting and processing burden on state and local police agencies. Several states, during their revision process, have contacted NHTSA or the Federal Highway Administration (FHWA) to inquire as to what elements these agencies recommend to be collected on crash reporting forms. At recent national meetings and forums, traffic safety information collectors and users have asked for guidelines for states to use when revising their crash forms or when working with software vendors. The National Safety Council's (NSC) Traffic Records Committee studied the issues related to collection and use of highway safety information and issued a report entitled *A NATIONAL AGENDA for the Improvement of Highway Safety Information Systems*. Goal VI of the National Agenda calls for establishing and promoting "technical standards of highway safety information systems." It specifically recommends promoting "the use of ... existing standards and other recommended guidelines.."

Section 2002(a) of The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) addressed the issue of collection and reporting by states of data on traffic related deaths and injuries and directed the Secretary to establish a program collecting such information from the states. It stated that, "The purposes of the program are to ensure national uniform data on such deaths and injuries and to allow the Secretary to make determinations for use in developing programs to reduce such deaths and injuries and making recommendations to Congress concerning legislation necessary to implement such programs." The section went on to say that "The Secretary shall establish minimum reporting criteria for the program."

The traffic and highway safety communities were asked to respond to the legislative language in Section 2002(a) of the ISTEA by means of a federal regulatory notice. Responders indicated support of uniformity as a concept, but not as a federal requirement. ISTEA was renewed in June 1998 as the Transportation Equity Act for the 21st Century (TEA21). This legislation requires the Secretary of Transportation to recommend model data elements for

crash reporting and provides funding incentives to states which demonstrate in a plan how they will implement them.

Benefits of MMUCC to the Highway Safety Community

Uniform criteria, if adopted by states, would assist all levels of users. The advantages of the standardized, statewide elements and definitions introduced by MMUCC include:

- Easier to support state and local highway safety programs because of more consistent and accurate data;
- Possibility for interstate comparisons and analyses;
- Improved collaboration across health and transportation sectors resulting in improved crash data for public health and injury control purposes
- Enhanced decision making for targeting resources as part of 402, Safe Communities, etc., implementing performance measures, and evaluating program effectiveness;
- Feasibility of linkage to medical outcome, global positioning systems, and other highway traffic safety related data, thereby helping identify the cost of specific crash, vehicle, roadway and person characteristics and, ultimately, who pays;
- Collaborative approach so that states learn from each other by sharing their successes, identifying their common problems and working together on joint program priorities;
- Routine monitoring of emerging problems or issues as changes, such as vehicle or highway modifications, are implemented; and,
- Development of common software for crash data entry.

At the national level, comparable state data would expand NHTSA and FHWA analytical capabilities. The collection and coding of information in Federal data systems, most of which are used by state and local agencies, would improve, possibly leading to further revisions and economies in how the data are collected.

MMUCC Development Process

The development of the Model Minimum Uniform Crash Criteria (MMUCC) is a public/private collaborative effort of the highway and traffic safety communities. The process is being sponsored by the NAGHSR, FHWA, and NHTSA. The objective is to provide for the greatest possible input so that MMUCC is perceived not as a product of any one organization, but as something that all stakeholders can claim ownership of.

The following steps have been accomplished:

U A task group of crash data experts and users from within NHTSA and FHWA with participation from crash data experts from Maryland and Virginia, drafted a "straw model" which served as a starting point. The elements considered were drawn from a data set presented at a workshop on crash data at the 22nd International Forum on Traffic Records & Highway Safety Information Systems/5th NHTSA Conference on the Analysis of State Highway Safety Data held in July 1996.

U The NAGHSR Executive Board endorsed the process and formed a team of state and local experts in the collection, processing, and use of crash data.

U The NAGHSR "expert team" met with the task group to review the draft straw model, and developed the ***Draft Guideline for Minimum Standardized Crash Data Reporting,*** which was published jointly by NAGHSR, NHTSA, and FHWA in June 1997.

U The draft was circulated to the following membership groups for review and input:

- < National Association of Governors' Highway Safety Representatives
- < American Association of State Highway Transportation Officials (AASHTO)
- < American Association of Motor Vehicle Administrators (AAMVA)
- < Commercial Vehicle State Administrations (CVSA)
- < State and Territorial Injury Prevention Directors' Association (STIPDA)
- < Emergency Medical Services State Directors
- < Transportation Research Board's Traffic Records and Accident Analysis Subcommittee (A3B11)
- < National Safety Council's Traffic Records Committee
- < Motor Carriers Advisory Committee
- < NHTSA Regions
- < FHWA State and Regional Offices

The draft was also made available through the NHTSA World Wide Web page.

U The NSC Traffic Records Committee endorsed the MMUCC process at its Annual Meeting at the 23rd International Forum on Traffic Records & Highway Safety Information Systems in Tucson, AZ, in July 1997. The name of the document was changed to Minimum Uniform Crash Criteria (MUCC).

- **U** In cooperation with the NSC Traffic Records Committee, NHTSA, FHWA, and NAGHSR sponsored a National Workshop on July 17 - 18, 1997 at the Loews Ventana Canyon Resort in Tucson, AZ, to review the draft and provide input for the next draft. The expert panel served as facilitators for this workshop.

- **U** Feedback was also received through other modes, e.g., by comments sent directly to the members of the task group/expert team or through the Web Site established on the Internet.

- **U** The input received at the National Workshop along with comments received directly or through the Web Site, was reviewed at a meeting of the expert panel held in Washington, DC September 1997.

- **U** A revised draft was jointly published by the NAGHSR, the FHWA and the NHTSA in December 1997. It was circulated to membership groups within the highway safety community and to other groups and individuals expressing an interest. A federal register announcement was published on February 2, 1998 announcing the availability of the draft for review.

- **U** By March 31, 1998, 13 states and 5 national agencies/organizations involved in highway traffic safety had responded. Comments were directed to specific data elements in addition to the following questions:

    1. Is the Guideline the appropriate minimum data set?
       Yes = 64% of respondents

    2. Can the data elements be collected by the data collectors in the field?
       Yes = 55% of respondents

    3. Do the data elements represent a good balance between the data needs and data wants?
       Yes = 82% of respondents

    4. Is it clear which data elements must be collected at the scene and which can be obtained from linkage or derived?
       Yes = 90% of respondents

    5. Do the data elements make it possible to evaluate emerging issues such as fatigue, aggressive driver, speed, etc.?
       Yes = 64% of respondents

       Can some data elements be dropped under the assumption that they are more applicable for special studies?
       Yes = 0%; 73% did not answer

    6. Which 3 data elements would be the most difficult for your state to collect?
       2 crash data elements listed (11%)

None of the vehicle data elements listed
10 of the person data elements listed (34%)

Which data elements cannot be collected because of violation of state statutes?
None = 100%

7. Which potential barriers (discussed in next section) are most applicable to your state?
Time consuming for police, expensive, difficult, no funding sources, may cause liability problems

What resources will your state need to overcome them?
58% of respondents did not answer
33% of respondents said funding and additional staff

8. Should we collect citation and violation codes as part of MMUCC?
Yes = 50% of respondents

9. Is it feasible to derive the VIN by linking vehicle plate number to the vehicle registration data file?
Yes = 82% of respondents

U The expert panel met in April 1998 and reviewed this round of comments.

U During this process, Congress passed the Transportation Equity Act for the 21st Century (TEA21) in June 1998. TEA21 provides incentive grants to states to improve highway safety data. Included in this grant program is the requirement for the Secretary of Transportation in consultation with states to recommend model data elements to standardize data. In response to the development of this legislation, the expert panel recognized that the MMUCC development process met the consultative requirement. Thus, the panel changed the name of MUCC to Model Minimum Uniform Crash Criteria (MMUCC) and recommended that MMUCC serve as the model data elements.

U The Final Draft of MMUCC was published in August 1998 and distributed jointly by FHWA, NHTSA, and the NAGHSR.

Development Criteria for MMUCC Data Elements

Deciding Which Data Elements to Collect

In an effort to standardize a minimum number of data elements for MMUCC, the following criteria were used as the basis for selection.

AN ELEMENT MUST BE APPROPRIATE. It must be needed for highway or traffic safety purposes. Elements which are administrative in nature or have little or no application for highway or traffic safety analysis were not included.

AN ELEMENT MUST BE COMPREHENSIVE. It must include all aspects of the definition.

EACH ELEMENT WILL INCLUDE:

- A **definition**;
- A **set of attribute values**; and,
- A **rationale** (importance to highway safety).

EXISTING STANDARDS DOCUMENTATION WILL BE FOLLOWED. ANSI D16.1, ANSI D20.1, the Fatality Analysis Reporting System (FARS), the General Estimates System (GES), the Critical Automated Data Reporting Elements (CADRE), and the National Governors' Association (NGA)/SafetyNet elements and definitions will be used where applicable. However, modifications to definitions and values may be made to reduce the size of the data set.

MMUCC WILL PRESENT ONLY THE DATA ELEMENTS. MMUCC does not attempt to organize the proposed data elements and their attribute values into a reporting format. It also will not present coding values for the element values. States have the option of designing the format and content of their police crash report and the most appropriate data collection system and data coding conventions to meet their needs.

THE DATA SET COLLECTED AT THE SCENE WILL BE MINIMAL. Data for analytical purposes will be derived from existing data elements or other data files whenever possible. States have the option to expand the data set to meet state specific needs.

DATA ELEMENTS WILL BE INCLUDED TO FACILITATE LINKAGE TO OTHER DATA SOURCES. Data elements describing the location, date, time, persons involved, and others are important for police to document the events at the scene. When standardized, they are also useful for linking to other state data.

Reporting Thresholds

Background

State data have limitations because of reporting thresholds. When all crashes are not included in a state's file, any analysis is limited by those which are. For example, when only crashes that result in an injured person are included on a statewide database, the lack of information about the uninjured makes it impossible to measure the downward shift from injured to not injured when a safety program or measure is implemented. When the less serious or no injury cases are excluded, the exclusion results in eliminating some of the highway safety success stories and cases for those not affected (persons who do not use the countermeasure and receive no injury). The same is true if the data include only fatalities or even the most seriously injured, such as those persons treated at trauma centers. Also, when states and different agencies within a state choose different levels of property damage for reporting, the mix of crashes in each state will vary. Police vary in their estimate of damage and, over time, the same repair may cost more because of inflation. Finally, regardless of the threshold levels, sometimes the data collector may find it easier to ignore them and avoid the demands of data collection.

Which Crashes Should Be Reported?

From the point of view of the police collecting crash data, less is better. Police officers are responsible for investigating the crash at the scene and documenting information about the crash, vehicles, and persons involved. Police, understandably, resent expanding the scope of data collection to meet users' needs because the extra data are perceived as not related to police functions and, thus, too time consuming.

From the point of view of the evaluator/user, more is better. Information is needed about all crashes and all persons involved to accurately monitor the status of highway safety. Incomplete data greatly limit the usefulness of the state's crash data as a source of information for supporting highway safety program efforts.

Types of Reporting Thresholds

States have adopted reporting thresholds that balance data collection demands with available staff time and funds. Thresholds may focus on the type of roadway (public/private), the level of property damage or vehicle damage, the occurrence of an injury, and/or the absence of an injury. Implementation of these threshold criteria is not uniform among the states.

1. **Type of Road**: Most states limit reporting to crashes which occur on public roads. Thus, crashes and/or injuries occurring in private driveways or parking lots are not included in these crash files.

2. **Property or Vehicle Damage**: Most states limit reporting to those crashes that involve $500-$1,000 of property damage and exclude fender benders, perceived as insignificant. Larger states are more likely to choose the higher property damage threshold or even to go beyond property damage to include only those crashes in which at least one vehicle had to be towed away.

3. **Occurrence of Injury**: Almost all states report crashes that involve an injured person as defined by use of a functional measure (KABCO) that indicates need for help from the scene. Information is collected identifying the person by age, sex, injury severity, position in vehicle, vehicle number and whether the person was using safety equipment (belts, helmets, etc.).

4. **Absence of an injury**: In an effort to save time and money, some states do not collect data about the uninjured passengers involved in motor vehicle crashes.

Recommended Minimum Reporting Threshold

As a minimum, states should collect data for motorists, injured and uninjured, and for non-motorists involved in crashes in which at least one vehicle is disabled by damage severe enough to prevent driving it.

Data Linkage to Other Data Sources to Minimize Data Collection

MMUCC recommends linkage of the crash data file to other sources of information related to the environment of crash or to the vehicles and people involved in the crash. Crash data alone do not indicate the magnitude of the problem of motor vehicle crashes or the significance of highway safety countermeasures. They do not provide details about the roadway, vehicle, the history of the driver, or the medical and financial consequences for those who are injured. Collection of this information in the crash data are beyond the scope of the police function and would represent a duplication of effort because the data are collected elsewhere.

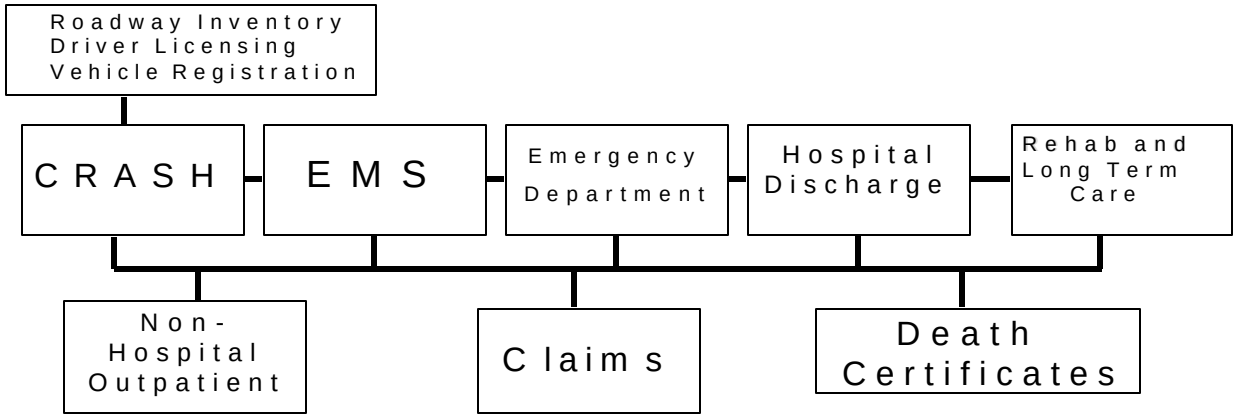
Roadway inventory, driver licensing, vehicle registration, EMS, emergency department, hospital, death certificate, census and other state data contain information related to motor vehicle crashes. Some of the data, such as the driver licensing, vehicle registration, and roadway inventory files are collected routinely rather than at the time of the crash. Other data, such as the crash and injury records are collected at the time of the crash at the scene, en route, at the emergency department, in the hospital, and after hospital discharge. Together these various data sources provide information about the environment surrounding the crash event, the circumstances of the crash, and the medical and financial consequences for those persons who are injured. When these files are linked, as indicated in the diagram below, it is possible to describe in detail the components of a crash and the events at the scene and to follow the persons injured in the crash from the scene through the health care system. Linked data make it possible to determine who is at risk, at what cost and the factors that make a difference to injury outcome. (See Appendix G)

Example of a Data Linkage System

An example of data linkage is the Crash Outcome Data Evaluation System project which evolved from the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). ISTEA mandated that the National Traffic Safety Administration (NHTSA) prepare a Report to Congress about the benefits of safety belt and motorcycle helmet use. To obtain the crash and injury outcome information needed for this report, NHTSA sponsored the CODES project, awarding grants to Hawaii, Maine, Missouri, New York, Pennsylvania, Utah, and Wisconsin. Each grantee linked the available state crash, EMS, emergency department, hospital discharge, insurance, and other traffic records and performed uniform analyses of

the effectiveness of safety belts and motorcycle helmets. The Report was delivered to Congress in February, 1996.

Figure 1: Example of Linked Data System



Benefits of Linkage

Data linkage expands the usefulness of each data file being linked without the delay and expense of new data collection. Linkage makes it possible to evaluate the relationship of specific roadway, crash, vehicle, and human factors at the time of a motor vehicle crash. It also permits these specific factors to be linked to health outcome data to determine their medical and financial consequences. Understanding what increases injury severity and health care costs facilitates choosing safety priorities that have the most impact on reducing death and disability. This information is particularly useful for decision making by safety program managers, engineers and state legislators. At the same time, the linkage process itself improves the quality of state data and promotes collaboration between the traffic safety, highway safety and injury control communities.

Voluntary Implementation of MMUCC

In its final form, MMUCC will be available to assist states in the process of revising their crash reporting forms and crash data processing systems. Except for the data elements required by the Office of Motor Carriers, implementation of the MMUCC data elements will be voluntary and according to state-specific specifications without any mandates by either NHTSA or FHWA. Instead, FHWA and NHTSA will encourage and support:

- Continuing to support traffic records assessments to identify what resources are needed;
- Funding the development of educational materials including video, overheads, slides, brochures as part of an implementation package for MMUCC;
- Developing a training workshop curriculum and "how to" manual that provide states with the necessary implementation skills and an analysis of the expected costs;
- Surveying on a regular basis the status of MMUCC implementation and highlighting model states;
- Funding the development and implementation of model analyses and reports based on the MMUCC data elements, and distributing the results widely;
- Supporting efforts by the American Association of State Highway and Transportation Officials (AASHTO) and others to develop software to facilitate the implementation of MMUCC; and,
- Encouraging states with data plans eligible for data incentive grants under TEA21 to adopt the MMUCC data elements and definitions.

Potential Barriers and Their Solutions at the State Level

At the July 1997 National Workshop, participants identified several areas which they considered to be barriers to implementation and then discussed possible solutions to these barriers. The following items summarize that discussion:

- MMUCC is too time consuming for the police to collect at the scene.

  Many MMUCC data elements and attribute values match data already being collected by police in most states. Electronic data collection technology has the potential of saving time while making the data more timely at local, regional, and state levels for management, feedback, and analyses. Implementing reporting thresholds to exclude the uninjured and/or minor crashes greatly limits the usefulness of the data that are collected. Collaboration with American Association of Motor Vehicle Administrators (AAMVA), American Association

of State Highway Transportation Officials (AASHTO), International Association of Chiefs of Police (IACP), Institute of Transportation Engineers (ITE), Society of Automotive Engineers (SAE), Association of State and Community Engineers (ASCE) and other organizations is important to broaden MMUCC beyond the safety focus so that duplicate data collection is eliminated at the same time that users needs are met.

! MMUCC is too expensive for states to implement.

Many states are using adjustments for the year 2000 as justification for revising their computerized data systems. For some, existing legacy systems make the process expensive and complicated but new state-of-the-art technology may overcome the limitations of these systems. Vendors are expected to play a large role in the standardization effort by incorporating MMUCC into the software the states plan to buy. Successful implementations of MMUCC can be identified, publicized and made available in a NHTSA/FHWA technology clearinghouse as models for states to evaluate and consider implementing. (In fact a Technology Clearinghouse has been established and can be accessed through the Internet at www.iacptechnology.org)

! Funding sources are limited for implementing MMUCC.

States and local agencies need incentives to implement MMUCC. The 1998 TEA21 legislation provides funding incentives for states interested in improving their highway safety data. At the state level, lack of adequate funding sources increases the competition for those resources that do exist. Stakeholders need to collaborate with one another and adopt a win-win approach to collaboratively obtain the necessary funds and staff resources. To encourage multi-agency cooperation, state user groups should be convened (as recommended in Goal II of the NSC's National Agenda) as an inexpensive mechanism for sharing expertise and receiving technical assistance in traffic records and data linkage from NHTSA. Traffic records assessments should be expanded to include a focus on MMUCC.

! MMUCC is too difficult to implement.

Resistance to new data collection can be minimized by developing routine, user friendly, and useful feedback to the data collectors. Regular in-service training about how to interpret feedback information will help the data collectors understand the value of MMUCC. Implementation of MMUCC can be facilitated by incorporating it into the existing routine training provided to police and highway safety analysts. Developing a process to update ANSI Standards D16.1 and D20.1 on a regular basis will help to implement and maintain standardized minimum uniform crash criteria.

! Concerns about liability may inhibit implementation of MMUCC

Access to crash data files based on MMUCC should be restricted for highway safety and injury control purposes. Protocols and model legislation for confidential access should be standardized nationally to prevent confusion. Appropriate Transportation Research Board committees should be used to investigate and communicate the liability issues to those involved. However, access to sensitive information should be

improved for those who need to know. Some MMUCC data should be aggregated to provide routine feedback via management reports and for public use via the Internet. Data users should be encouraged to make presentations and sponsor information booths at conferences so that the usefulness of the information generated by MMUCC becomes well known.

Analysis of Current Use of MMUCC Data Elements

Even though obstacles exist, the good news is that of the 113 data elements included in MMUCC, about 58 data elements are included in NHTSA's National Center for Statistics and Analysis's State Data System. In this system, crash data files from seventeen states are obtained each year and converted to Statistical Analysis System (SAS) format for use by NHTSA data analysts. An analysis of these seventeen state data files showed that:

Approximately 15 out of the recommended 18 **crash level** MMUCC elements (83 percent) already exist on most of the seventeen states' crash data files.

  On average, the seventeen states collect a total of 35 crash level variables.

Approximately 15 out of the recommended 28 **motor vehicle level** MMUCC elements (54 percent) already exist on most of the seventeen states' crash data files.

  On average, the seventeen states collect a total of 40 motor vehicle level elements.

Approximately 16 out of the recommended 29 **person level** MMUCC elements (55 percent) already exist on most of the seventeen states' crash data files.

  On average, the seventeen states collect a total of 25 person level elements.

Approximately 4 out of the recommended 8 **crash derived data elements** MMUCC elements(50 percent) already exist on most of the seventeen states' crash data files.

All of the recommended **vehicle derived data elements** MMUCC elements already exist on most of the seventeen states' crash data files.

Eight of the seventeen states in the State Data System include VIN information on their state crash data files.

Organization of MMUCC

The data elements are classified into four major categories--crash, vehicle, person, and roadway--and organized into three sections according to whether the data are obtained at the scene, derived, or linked. Data collected by the police at the scene are recorded directly onto the crash report. Derived data are created from data elements that have already been collected and computerized. Linked data are generated after the crash data file has been linked to injury, licensing, registration, roadway inventory or other data files.

Each type of data element has a unique identifier. Crash data element numbers are preceded with a "C"; Vehicle data element numbers are preceded with a "V"; Person data element numbers are preceded with a "P", and Roadway data elements are preceded with a "R". When the data element is derived, the letter "D" is added. When the data element is linked, the letter "L" is added.

Some data elements are marked with a double asterisk **. These data elements currently are mandated by the Office of Motor Carriers for crashes involving commercial vehicles under their regulation.

Each data element is presented using the following format:

(C,V,P,or R)(D or L)# Data Element Name

Definition: Definition of the data element

Code: Attributes

Rationale: Justification for including the data element

Note: ANSI D-20 and D16.1 data element names, definitions, and values were used whenever possible. In some cases the attributes were modified to clarify or simplify the data collection and use of the information.

One of the values listed under many of the elements to be collected at the scene is "not reported." This value is not collected at the scene but is to be coded on an analytic file created from crash reports. It signifies that no value was reported for that element, even though one may have been expected. It differs form the value "Unknown" which is recorded by the police officer when he/she is unable to ascertain the correct coding for that element.

LIST OF MODEL MINIMUM UNIFORM CRASH CRITERIA

Model for Minimum Uniform Crash Criteria

Motor Vehicle Crash

The following data elements are recommended to be collected for a motor vehicle crash. See Glossary for the ANSI D16.1 definition of a motor vehicle crash.

Motor Vehicle Crash Level

The crash level data elements describe overall characteristics of the crash.

Crash Data Elements Collected at the Scene

C1. **Crash Case Identifier**

Definition: The unique identifier within a given year that identifies a given crash.

Code: State specific identifier

Rationale: Facilitates linkage of traffic record sub-files back to the crash data file. If this identifier is available at the scene, it can also be recorded on the EMS record for linkage purposes.

C2. **Crash Date and Time**

Definition: The date (year, month, and day) and time (hour and minute) at which a crash occurred.

Code: YYYYMMDDHHMM (See Appendix B)

Rationale: Important for management/administration, evaluation, and linkage

C3. **Crash County**

Definition: The county in which a crash occurred.

Code: Record the name of the county in which a crash occurred. If codes are used instead of narrative, use the Federal Information Processing Standards #6-4 (FIPS) Code for county (Pub 55DC-4/87). If state specific codes are used, they should be convertible to the FIPS format.

Rationale: Important for analyses of county area programs such as “Safe Communities.” Critical for data linkage of the crash file to other state data files (such as EMS, hospital, roadway, etc.). Important for intrastate comparisons.

C4. **Crash City/Place**

Definition: The city/place in which a crash occurred.

Code: Record the name identifying the city/place in which a crash occurred. If codes are used instead of narrative, use the Federal Information Processing Standards #8-6 (FIPS) Code for city or place (Pub 55DC-4/87). If state specific code used, it should be convertible to the FIPS format.

Rationale: Important for analyses of local area programs such as "Safe Communities." Critical for data linkage of the crash file to other state data files (such as EMS, hospital, roadway, etc.).

C5. **Crash Roadway Location**

Definition: Exact location on the roadway indicating where the crash occurred.

Code: The optimum definition of crash roadway location is a route name and GPS (Global Positioning System/GIS(Geographic Information System) if a highway agency has a linear referencing system that allows them to relate GPS coordinates to specific locations in road inventory, traffic, driver, and other files. The location information in a crash file must have the capability to be linked to location information in these other important files required in studying site-specific safety issues. A GPS/GIS provides latitude/longitude coordinates. States without GPS/GIS should indicate location using their current system including route name/number and milepoint/link-node. (See Appendix G for other roadway linkage data elements.)

Rationale: Important for problem identification, prevention programs, engineering evaluations, and linkage purposes.

C6. **First Harmful Event**

Definition: The injury or damage producing event which characterizes the crash type and identifies the nature of the first harmful event.

Code:
Non-collision
- Overturn
- Jackknife
- Other non-collision

Collision with person, vehicle, or object not fixed
- Pedestrian
- Pedalcycle
- Railway vehicle (e.g., train, engine)
- Animal
- Motor vehicle in transport
- Parked motor vehicle

Work zone maintenance equipment
Other non-fixed object
Collision with fixed object
Bridge/culvert
Embankment/ditch/curb
Guardrail/median barrier
Other fixed object
Tree
Utility pole/light support
Work zone maintenance equipment
Unknown fixed object
Not reported
Unknown

Rationale: Needed for uniformity in reported road vehicle crash statistics, understanding crash causation, and identifying possible crash avoidance countermeasures. For analytic purposes it may be desirable to collect and use information about subsequent events, some of which may be harmful. (See **Sequence of Events V23**.)

C7. **Location of First Harmful Event**

Definition: The location of the First Harmful Event as it relates to its position within or outside the trafficway. (See Appendix H showing diagram defining the sections of the trafficway.)

Code: Roadway
Shoulder
Median
Roadside
Gore
Outside trafficway
Not reported
Unknown

Rationale: Important to identify highway geometric deficiencies.

C8. **Manner of Crash/Collision Impact**

Definition: The identification in a crash of the manner in which two vehicles in transport initially came together without regard to the direction of force. (For **Direction of Force to Vehicle** see V25.)

Code: Not collision between two vehicles in transport
Rear-end
Head-on
Rear-to-rear
Angle
Sideswipe, same direction

Sideswipe, opposite direction
Not reported
Unknown

Rationale: Important for evaluation of occupant injuries and structural defects. This data element can be used in conjunction with Vehicle Maneuver/Action (V21) to describe the crash.

C9. **Source of Information**

Definition: Identity of the source providing the information on the crash report.

Code: Subfield 1: Source of Information
Police agency
Motorist
Other
Subfield 2: Police Reporting Agency Identifier
Subfield 3: Type of Police Agency
State police/highway patrol
City police
Sheriff department
BIA/Tribal
Other

Rationale: This data element is important for quality control and identification purposes. The Police Reporting Agency Identifier is used to track the reporting of Safetynet crashes for quality control and training purposes.

C10. **Date and Time Crash Reported to Police Agency**

Definition: The date and time at which the call was placed notifying the police agency about the crash.

Code: YYYYMMDDHHMM

Rationale: Useful as a surrogate for time of the crash.

C11. **Weather Condition**s

Definition: The prevailing atmospheric conditions that existed at the time of the crash.

Code: Subfield 1: Weather Condition #1
Clear
Cloudy
Fog, smog, smoke

Rain
Sleet, hail (freezing rain or drizzle)
Snow
Severe crosswinds
Blowing sand, soil, dirt, snow
Other
Not reported
Unknown

Subfield 2: Weather Condition #2

See Subfield 1

Rationale: Important for management/administration and evaluation. Critical for preventive programs and engineering evaluations.

C12. **Ambient Light**

Definition: The type of light that exists at the time of a motor vehicle crash.

Code:
Daylight
Dawn
Dusk
Dark - lighted roadway
Dark - roadway not lighted
Dark - unknown roadway lighting
Other
Not reported
Unknown

Rationale: Important for management/administration and evaluation. Critical for preventive programs and engineering evaluations.

C13. **Road Surface Condition**

Definition: The roadway surface condition at the time and place of a crash.

Code:
Dry
Wet
Snow
Ice
Sand, mud, dirt, oil, gravel
Water (standing, moving)
Slush
Other
Not reported
Unknown

Rationale: Important to identify and correct high wet-surface crash locations and provide information for setting coefficient of pavement friction standards. Critical for prevention programs and engineering evaluations.

C14 **Contributing Circumstances, Environment**

Definition: Apparent environmental conditions which contributed to the crash.

Code:
None
Weather conditions
Physical obstruction
Glare
Animal in roadway
Other
Not reported
Unknown

Rationale: Important to determine existence of unusual conditions that could be useful in determining the need for additional traffic control devices or geometric improvements. (Pedestrians and pedalcyclists are covered in traffic units.)

C15 **Contributing Circumstances, Road**

Definition: Apparent condition of the road which contributed to the crash.

Code:
None
Road surface condition (wet, icy, snow, slush, etc.)
Debris
Rut, holes, bumps
Work zone (construction/maintenance/utility)
Worn, travel-polished surface
Obstruction in roadway
Traffic control device inoperative, missing or obscured
Shoulders (none, low, soft, high)
Non-highway work
Other
Not reported
Unknown

Rationale: Important to determine highway maintenance and possible engineering needs.

C16 **Type of Roadway Junction**

Definition: A junction is either an intersection or the connection between a driveway access and a roadway other than a driveway access.

Code:
Not at junction
Four-way intersection
T-intersection
Y-intersection
Traffic circle/roundabout
Five-point, or more
On ramp
Off ramp
Crossover
Driveway
Railway grade crossing
Shared-use paths or trails
Not reported
Unknown

Rationale: Important for site specific safety studies to identify actual or potential safety problem locations.

C17 **School Bus Related**

Definition: Indicates if a school bus is related to the crash. The "school bus", with or without a pupil on board, must be directly involved as a contact vehicle or indirectly involved as a non-contact vehicle.

Code:
No
Yes, school bus directly involved
Yes, school bus indirectly involved
Not reported
Unknown

Rationale: Important in determining where and how school children are at the greatest risk of injury when being transported by school bus and the extent to which school bus operations affect overall traffic safety.

C18. **Work Zone Related** (**Construction/Maintenance/Utility**)

Definition: A crash that occurs in or near a construction, maintenance, or utility work zone, whether workers were actually present at the time of the crash or not. "Work zone related" crashes may also include those involving vehicles slowed or stopped because of the work zone, even if the first harmful event was before the first warning sign. (See Appendix J for diagram of work zone areas.)

Code: Subfield 1: Was the crash in or near a construction, maintenance or utility work zone?

No
Unknown
Yes (complete subfields 2-4)

Subfield 2: Location of the crash:

Before the first work zone warning sign
Advance warning area (after the first warning sign but before the work area)
Transition area (where lanes are shifted or tapered for lane closure)
Activity Area (adjacent to actual work area, whether workers and equipment were present or not)
Termination area (after the activity area but before traffic resumes normal conditions)

Subfield 3: Type of work zone

Lane closure
Lane shift/crossover
Work on shoulder or median
Intermittent or moving work
Other

Subfield 4: Workers present

Yes
No
Unknown

Rationale: This data element needs to be collected at scene because work zones are relatively short term or moving operations that are not recorded in permanent road inventory files. The information is important for assessing the impact of various types of on-highway work activity on traffic safety and evaluating Traffic Control Plans used at work zones and to make adjustments to the traffic control plans to enhance safety to workers and traveling public.

Motor Vehicle Level

The motor vehicle data elements describe the characteristics, events, and consequences of the motor vehicle involved in the crash.

Vehicle Data Elements Collected at the Scene

V1. **Vehicle Unit Number**

Definition: Number assigned to uniquely identify within the crash each vehicle involved in the crash.

Code: Sequential number

V2. **Vehicle Registration State and Year**

Definition: The state, commonwealth, territory, Indian nation, U.S. Government, foreign country, etc. issuing the registration plate and the year of registration as indicated on the registration plate displayed on the vehicle. For foreign countries, MMUCC requires only the name of the country. Border states may want to collect the name of individual Canadian Provinces or Mexican States.

Code: Identifier of the state, foreign country, U.S. government, Indian Nation, etc. (See Appendix A) and YYYY for the year

Rationale: This element is critical in providing linkage between the crash and vehicle registration files to access the vehicle identification number.

V3. **Vehicle License Plate Number**

Definition: The alphanumeric identifier or other characters, exactly as displayed, on the registration plate or tag affixed to the vehicle. For combination trucks, vehicle plate number is obtained from the power unit or tractor.

Code: Alphanumeric identifier assigned by the state, foreign country, U.S. government, Indian Nation

Rationale: This element is critical in providing linkage between the crash and vehicle registration files to access the vehicle identification number.

V4. **Vehicle Make**

Definition: The distinctive (coded) name applied to a group of vehicles by a manufacturer.

Code: Assigned by vehicle manufacturer

Rationale: Important for use in identifying vehicle make, for evaluation, research and crash comparison purposes.

V5. **Commercial Trailer Registration State and Year**

Definition: The state, commonwealth, territory, Indian nation, U.S. Government, foreign country, etc. issuing the registration plate and the year of registration as indicated on the registration plate displayed on the trailer. For foreign countries, MMUCC requires only the name of the country. Border states may want to collect the name of individual Canadian provinces or Mexican States.

Code: Identifier of the state, foreign country, U.S. government, Indian Nation, etc. (See Appendix A) and YYYY for the year

Rationale: This element is critical in providing linkage between the crash and vehicle registration files to access the vehicle identification number.

V6. **Commercial Trailer License Plate Number**

Definition: The alphanumeric identifier exactly as displayed, on the registration plate or tag affixed to the trailer.

Code: Alphanumeric identifier assigned by the state, foreign country, U.S. government, Indian Nation

Rationale: This element is critical in providing linkage between the crash and vehicle registration files to access the vehicle identification number.

V7. **Carrier Name****

Definition: The name of an individual, partnership or corporation responsible for the transportation of persons or property. (**currently mandated by Federal Highway Administration's Office of Motor Carriers.)

Code: Subfield 1: Carrier Name
See Appendix C
Subfield 2: Carrier Name Source
Shipping papers (truck) or trip manifest (bus) or logbook (Record of Duty Status)
Other
Not reported
Unknown

Rationale: The Federal Highway Administration's Office of Motor Carriers has the authority to fine and sanction truck and bus companies that are judged to be unsafe. A key way to identify such carriers is to collect crash data by the name of the company. Carrier crash data allows the OMC to focus

enforcement efforts on truck and bus companies that have the largest number of crashes.

V8. **Carrier Street Address****

Definition: The street address of the carrier. (**currently mandated by Federal Highway Administration's Office of Motor Carriers.)

Code: See Appendix D

Rationale: Since the Office of Motor Carriers has the authority to visit carriers to conduct review of compliance with FMCSRs, the street address of the carrier is important. The street address is also a way to cross-check the correct identity of the carrier.

V9. **Carrier Identification Number****

Definition: A unique number, found on the power unit, and assigned by the U.S. Department of Transportation, Interstate Commerce Commission, or by the state to a motor carrier. (**currently mandated by Federal Highway Administration's Office of Motor Carriers.)

Code: Subfield 1: Identification Number
Subfield 2: Issuing Authority
- US DOT
- ICC
- State
- Mexico
- Canada

Subfield 3: Source of Number
- Shipping papers (truck) or trip manifest (bus) or logbook (Record of Duty Status)
- Other
- Not reported
- Unknown

Rationale: Important for management/administration, evaluation, and linkage.

V10. **Vehicle Configuration****

Definition: Indicates the general configuration of vehicle. (See Appendix I for types of truck configurations.) (**currently mandated by Federal Highway Administration's Office of Motor Carriers.)

Code: Passenger car
Light truck(van, mini-van, panel, pickup, sport utility) with only four tires
Single-unit truck (2-axle, 6-tire)
Single-unit truck (3-or-more axles)

Truck/trailer
Truck tractor (bobtail)
Tractor/semi-trailer
Tractor/doubles
Tractor/triples
Unknown heavy truck, cannot classify
Motor home/recreational vehicle
Motorcycle
Bus (seats for more than 15 people, including driver)
Bus (seats for 7 - 15 people, including driver)
Other
Not reported
Unknown vehicle configuration

Rationale: This data element provides information about the general configuration of the vehicle which is important to evaluate the types of vehicles that have the most crashes and the effectiveness of various safety countermeasures. It should be collected for all crashes, not just those involving trucks.

V11. **Cargo Body Type****

Definition: The type of body for buses and trucks over 10,000 pounds GVWR. (**currently mandated by Federal Highway Administration's Office of Motor Carriers.)

Code: Not applicable
Bus (seats for more than 15 people, including driver)
Bus (seats for 7 - 15 people, including driver)
Van/enclosed box
Grain/chips/gravel
Pole
Cargo tank
Flatbed
Dump
Concrete mixer
Auto transporter
Garbage/refuse
Other
Not reported
Unknown

Rationale: This data element provides more information about the vehicle, including all major cargo body types. The information it provides can be important in helping OMC make decisions on regulatory strategies for different types of vehicles.

V12. **Gross Vehicle Weight Rating of Power Unit****

Definition: A gross vehicle weight rating (GVWR) is a value, specified by the manufacturer of a motor vehicle, that indicates the capacity of the vehicle to tow or carry loads. (**currently mandated by Federal Highway Administration's Office of Motor Carriers.)

Code: Weight Rating of Power Unit of the Motor Vehicle
less than or equal to 10,000 pounds
10,001-26,000
more than 26,000

Rationale: Three categories used for DOT regulation.

V13. **Total Occupants In Vehicle**

Definition: The count of occupants in this vehicle involved in the crash, including persons in or on the vehicle at the time of the crash.

Code: Total number of occupants including the driver
Unknown

Rationale: Important for use in evaluating total involved in crash and injury/severity.

V14. **Vehicle Role**

Definition: Indicates vehicle role in single and multi-vehicle crashes. Role does not imply fault.

Code: Non-contact
Non-collision
Striking
Struck
Both striking and struck
Not reported
Unknown

Rationale: Important to determine role of vehicle in a crash for management, research and evaluation.

V15 **Emergency Use**

Definition: Indicates vehicles, such as military, police, ambulance, fire, etc., which are on an emergency response. Emergency refers to a vehicle that is traveling with physical emergency signals in use-typically red light blinking, siren sounding, etc. Code yes only if the vehicle was on an emergency response.

Code: No
Yes
Not reported

Unknown

Rationale: Important for determining if vehicles on emergency runs are over-involved in crashes.

V16. **Hazardous Materials Placard (Cargo Only)****

Definition: Indication that a motor vehicle had a hazardous materials placard as required by federal/state regulations. (**currently mandated by Federal Highway Administration's Office of Motor Carriers.)

Code: Subfield 1: Did this vehicle have a hazardous materials placard?
Yes
No
Not reported
Unknown
Subfield 2: If yes, record from the hazardous materials placard:
(1) 4-digit placard number or name taken from the middle of the diamond or from the rectangular box; and
(2) 1-digit placard number from bottom of diamond

Rationale: Getting good data on crashes involving trucks carrying hazardous materials (HM) is important to the OMC. As a result, OMC imposes tighter regulations on carriers that operate vehicles that transport HM, pulls over sample HM carrying vehicles for roadside inspections, and conducts compliance reviews on a higher percent of HM carriers. This data element asks the reporting officer to observe: (1) whether or not the vehicle has a hazardous material placard, and (2) record what is on the placard. By recording this information, the FHWA will obtain good information about the types of hazardous materials involved in a crash and the crash scenes which were potential hazards.

V17. **Hazardous Materials Released (Cargo Only)** **

Definition: Indication whether hazardous materials were released from the cargo compartment. (**currently mandated by Federal Highway Administration's Office of Motor Carriers.)

Code: Not applicable
Yes - hazardous materials released
No - hazardous materials not released
Not reported
Unknown

Rationale: Getting good data on crashes involving trucks carrying hazardous materials (HM) is important to the OMC. As a result, OMC imposes tighter regulations on carriers that operate vehicles that transport HM, pulls over sample HM carrying vehicles for roadside inspections, and

conducts compliance reviews on a higher percent of HM carriers. This data element asks the reporting officer to indicate for those trucks carrying hazardous material, if the hazardous material spilled out of the cargo compartment. This information will indicate the crash scenes which were potential hazards because HM material escaped its packaging.

V18. **Vehicle Authorized Speed Limit**

Definition: Authorized speed limit for the vehicle at the time of the crash. The authorization may be indicated by the posted speed limit, blinking sign at construction zones, etc.

Code: Subfield 1: Authorized Value

Subfield 2: Unit of Measurement
Miles per hour
Kilometers per hour
Not applicable
Unknown

Rationale: Important for evaluation purposes in spite of the fact that the speed of the vehicle at the time of the crash may differ significantly from the authorized speed limit.

V19. **Direction of Travel Before Crash**

Definition: The direction of a vehicle's normal, general travel on the roadway before the crash. Notice that this is not a compass direction but a direction consistent with the designated direction of the road. For example, the direction of a state designated north-south highway must be either northbound or southbound even though a vehicle may have been traveling due east as a result of a short segment of the highway having an east-west orientation.

Code: Northbound
Southbound
Eastbound
Westbound
Not on roadway
Not reported
Unknown

Rationale: Important to indicate direction the vehicle was traveling before the crash for evaluation purposes.

V20. **Traffic Control Device Type**

Definition: The type of traffic control device (TCD) applicable to vehicle at crash location. Pavement markings are included under **Pavement Markings, Longitudinal (RL14)**.

Code:
No controls
Traffic control signal
Flashing traffic control signal
School zone signs
Stop signs
Yield signs
Warning signs
Railway crossing device
Not reported
Unknown

Rationale: This element needs to be collected at the scene because the presence of specific devices is better verified at the time of the crash. It is also important for ascertaining the relationship between the use of various TCDs and crashes and identifying the need for upgraded TCDs at specific crash locations.

V21. **Vehicle Maneuver/Action**

Definition: What the vehicle was doing prior to the crash.

Code:
Movements essentially straight ahead
Backing
Changing lanes
Overtaking/passing
Turning right
Turning left
Making U-turn
Entering traffic lane
Leaving traffic lane
Parked
Slowing or stopped in traffic
Other
Not reported
Unknown

Rationale: Important for evaluation purposes, particularly when combined with **Direction of Travel.**

V22. **Point of Impact**

Definition: The portion of the vehicle that impacted first in a crash.

Code: See Appendix E

Rationale: Important for use in evaluating injury severity in relation to vehicle impact and crash severity.

V23. **Sequence of Events**

Definition: The events in sequence for this vehicle.

Code: Subfield 1: First Event

- Non-collision
  - Overturn/rollover
  - Fire/explosion
  - Immersion
  - Jackknife
  - Cargo/equipment loss or shift
  - Equipment failure (blown tire, brake failure, etc.)
  - Separation of units
  - Ran off road right
  - Ran off road left
  - Cross median/centerline
  - Downhill runaway
  - Other non-collision
  - Unknown non-collision
- Collision with person, vehicle, or object not fixed
  - Pedestrian
  - Pedalcycle
  - Railway vehicle (e.g., train, engine)
  - Animal
  - Motor vehicle in transport
  - Parked motor vehicle
  - Work zone maintenance equipment
  - Other movable object
  - Unknown movable object
- Collision with fixed object
  - Impact attenuator/crash cushion
  - Bridge overhead structure
  - Bridge pier or abutment
  - Bridge parapet end
  - Bridge rail
  - Guardrail face
  - Guardrail end

Median barrier
Highway traffic sign post
Overhead sign support
Light/luminaire support
Utility pole
Other post, pole, or support
Culvert
Curb
Ditch
Embankment
Fence
Mail box
Tree
Other fixed object (wall, building, tunnel, etc.)
Work zone maintenance equipment
Unknown fixed object
Other
Not reported
Unknown
Subfield 2: Second Event
See Codes in Subfield 1
Subfield 3: Third Event
See Codes in Subfield 1
Subfield 4: Fourth Event
See Codes in Subfield 1

Rationale: Important for use in conjunction with most harmful event to generate complete information about the crash.

V24. **Most Harmful Event for this Vehicle**

Definition: Event which produced the most severe injury or greatest property damage for this vehicle.

Code: Non-collision
Overturn/rollover
Fire/explosion
Immersion
Jackknife
Cargo/equipment loss or shift
Other non-collision
Unknown non-collision
Collision with person, vehicle, or object not fixed
Pedestrian
Pedalcycle
Railway vehicle (e.g., train, engine)
Animal
Motor vehicle in transport

Parked motor vehicle
Work zone maintenance equipment
Other movable object
Unknown movable object

Collision with fixed object
Impact attenuator/crash cushion
Bridge overhead structure
Bridge pier or abutment
Bridge parapet end
Bridge rail
Guardrail face
Guardrail end
Median barrier
Highway traffic sign post
Overhead sign support
Light/luminaire support
Utility pole
Other post, pole, or support
Culvert
Curb
Ditch
Embankment
Fence
Mail box
Tree
Other fixed object (wall, building, tunnel, etc.)
Work zone maintenance equipment
Unknown fixed object

Other
Not reported
Unknown

Rationale: Important for use in conjunction with the **Sequence of Events V23** to generate complete information about the crash.

V25**. Direction of Force to Vehicle**

Definition: The direction of force in the crash which caused the most harmful event to this vehicle.

Code: Not applicable for non-collision events (rollover, fire, etc.)
Unknown clock position indicating direction of force
Clock position indicating direction of force

(Insert clock)

Rationale: Important for evaluation of occupant injuries and structural defects. This data element can be used in conjunction with **Most Harmful Event V24** to describe the crash.

V26. **Underride/Override**

Definition: An underride refers to this vehicle sliding under another vehicle during a crash. An override refers to this vehicle riding up over another vehicle. Either can occur with a parked vehicle.

Code:
No underride or override
Underride, compartment intrusion
Underride, no compartment intrusion
Underride, compartment intrusion unknown
Override, motor vehicle in transport
Override, other vehicle
Unknown if underride or override

Rationale: This information is needed to identify the magnitude of crashes in which an underride or override occurs to support NHTSA rulemaking activities.

V27. **Most Damaged Area**

Definition: The location of most damage on vehicle.

Code: See Appendix E

Rationale: Important for evaluation in particular in conjunction with speed and vehicle crash severity.

V28. **Extent of Damage**

Definition: Estimation of total damage to vehicle from crash

Code:
None/minor damage
Functional damage
Disabling damage
Severe/vehicle totaled
Not reported
Unknown

Rationale: Disabling or severe/vehicle-totaled damage implies damage to the vehicle that is sufficient to require the vehicle to be towed or carried from the scene. Determining whether a vehicle sustained this type of damage from a crash is key to consistent collection of crash data.

Person Level

The person data elements describe the characteristics, actions, and consequences to the persons involved in the crash.

Person Data Elements Collected at the Scene

Level 1: All Persons Involved

P1. **Date of Birth**

Definition: The year, month, and day of birth of person involved in a crash.

Code: YYYYMMDD

Rationale: Uses of accurate reporting of age include assessing effectiveness of occupant protection systems for specific age groups, and identifying the need for safety programs directed toward them. This element is also critical in providing linkage between the crash, EMS, and hospital records.

P2. **Sex**

Definition: The sex of person involved in a crash.

Code:
Male
Female
Not reported
Unknown

Rationale: Necessary to evaluate the effect of gender on occupant protection systems and vehicle design characteristics.

P3. **Person Type**

Definition: Type of person involved in a crash.

Code:
Driver
Passenger
Non-motorist
Not reported
Unknown

Rationale: Need to know person type for classification purposes to evaluate specific countermeasure designed for specific people.

P4. **Injury Status**

Definition: The injury severity level for a person involved in crash.

Code:
Fatal Injury (K)
Nonfatal Injury
- Incapacitating (A)
- Non-incapacitating (B)
- Possible (C)

No injury (O)
Not reported
Unknown

Rationale: Necessary for injury outcome analysis and evaluation. This element is also critical in providing linkage between the crash, EMS, and hospital records. Injury severity as indicated by KABCO is also desirable for states to collect.

Level 2: All Occupants

P5. **Occupant's Vehicle Unit Number**

Definition: The number assigned to the vehicle in which this person was an occupant.

Code: Number to indicate in which vehicle the occupant was located.

Rationale: Important to link occupants back to vehicles in which they were involved. Necessary to evaluate the effect vehicle type and specific make/model have on occupant protection effectiveness and injury status.

P6. **Seating Position**

Definition: The location for this occupant in, on, or outside of the motor vehicle prior to the impact of a crash

Code:
Front seat - left side (or motorcycle driver)
Front seat - middle
Front seat - right side
Second seat - left side (or motorcycle passenger)
Second seat - middle
Second seat - right side
Third row - left side (or motorcycle passenger)
Third row - middle
Third row - right side
Sleeper section of cab (truck)
Passenger in other enclosed passenger or cargo area (non-trailing unit such as a bus, etc.)
Passenger in unenclosed passenger or cargo area (non-trailing unit

such as a pickup, etc.)
Trailing unit
Riding on vehicle exterior (non-trailing unit)
Not reported
Unknown

Rationale: Without known seating position for each person in the vehicle, it is not possible to fully evaluate the effect of occupant protection programs.

P7. **Occupant Protection System Use**

Definition: The restraint equipment in use by occupant at the time of the crash, or the helmet use by a motorcyclist.

Code: None used - vehicle occupant
Shoulder belt only used
Lap belt only used
Shoulder and lap belt used
Child safety seat used
Helmet used
Not reported
Restraint use unknown

Rationale: Proper classification of the use of available occupant protection systems would be used to evaluate the effectiveness of such equipment.

P8. **Air Bag Deployed**

Definition: Deployment status of an air bag relative to position of the occupant.

Code: Subfield #1: Deployment
Deployed-front
Deployed-side
Deployed-both front/side
Not-deployed
Not applicable
Not reported
Deployment unknown
Subfield #2: Switch Status
Switch in ON position
Switch in OFF position
ON-OFF switch not present
Unknown if ON-OFF switch present
Not reported
Unknown position

Rationale: Necessary to evaluate the effectiveness of air bags and other occupant protection equipment, especially at a time when air bags are rapidly

increasing in the vehicle population and when consumers are allowed to have the air bag disconnected under certain conditions.

P9. **Ejection**

Definition: The location of each occupant's body as being completely or partially thrown from the vehicle as a result of a crash.

Code:
Not ejected
Totally ejected
Partially ejected
Not applicable
Not reported
Unknown

Rationale: Occupant protection systems prevent or mitigate ejections to different extent. Crash injury outcome may depend on information from this element.

P10. **Trapped**

Definition: Persons who are mechanically restrained in the vehicle by damaged vehicle components as a result of a crash, and are freed from the vehicle.

Code:
Not trapped
Extricated by mechanical means
Freed by nonmechanical means
Not reported
Unknown

Rationale: This element would be used to evaluate vehicle integrity and the impact of the need for Jaws of Life or other mechanical means on medical outcome for victims who are entrapped.

Level 3: All Drivers

P11. **Driver License State/Province**

Definition: The geographic or political entity issuing a driver license. Includes the states of the United States (including the District of Columbia and outlying areas), Indian Nations, U.S. Government, Canadian provinces, and Mexican States (including the Distrito Federal), as well as other jurisdictions.

Code:
Not Licensed
State (See Appendix A)

Indian Nation
U.S. Government
Canadian Province
Mexican State
International License (other than Mexico, Canada)
Not reported
Unknown

Rationale: Necessary to evaluate the effectiveness of various licensing laws. This element is also critical in providing linkage between the crash and driver license files at the state level.

P12. **Driver License Number**

Definition: A unique number assigned by the authorizing agent issuing a driver license to the individual.

Code: Alphanumeric identifier assigned by the state, foreign country, U.S. government, Indian Nation, etc.

Rationale: This element is critical in providing linkage between the crash and driver license files at the state level.

P13. **Driver Name**

Definition: The full name of the individual driver.

Code: See Appendix C

Rationale: This data element should be collected to corroborate the driver license number and to facilitate linkage when names are available in the health and insurance files. When possible, obtain this information from the driver license (via a bar code or "smart" license or via on-line linkage if the technology exists at the state level).

P14. **Contributing Circumstances**, **Driver**

Definition: The actions of the driver which may have contributed to the crash.

Code: Subfield 1: Driver Contributing Circumstances #1
No Improper driving
Failed to yield right of way
Disregarded traffic signs, signals, road markings
Exceeded authorized speed limit
Driving too fast for conditions
Made an improper turn
Wrong side or wrong way
Followed too closely

Failure to keep in proper lane or running off road
Operating vehicle in erratic, reckless, careless, negligent or aggressive manner
Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc.
Over-correcting/over-steering
Visibility obstructed
Inattention
Distracted
Fatigued/asleep
Operating defective equipment
Other Improper action
Not reported
Unknown

Subfield 2: Driver Contributing Circumstances #2
See subfield 1

Rationale: Important for evaluating the effect that dangerous driver behavior has on the crash.

P15. **Driver Condition**

Definition: The condition of the driver which may have contributed to the crash.

Code:
Apparently normal
Physical impairment
Emotional (e.g., depressed, angry, disturbed)
Illness
Fell asleep, fainted, fatigued, etc.
Under the influence of medications/drugs/alcohol
Other
Not reported
Unknown

Rationale: Important for evaluating the effect that driver fatigue, medications/alcohol/drugs, or other conditions have on the crash.

P16. **Cited**

Definition: Indication of whether driver received a motor vehicle citation as a result of the crash.

Code:
Yes
No
Pending
Unknown

Rationale: Important for evaluation of enforcement programs.

P17. Violation Codes

Definition: All violation codes that apply to indicate the type of violations for which driver was cited.

Code:
Subfield 1: Violation Code #1
- No violation
- (Violation Code)
- Not reported
- Unknown

Subfield 2: Violation Code #2
- No violation
- (Violation Code)
- Not reported
- Unknown

Subfield 3: Violation Code #3
- No violation
- (Violation Code)
- Not reported
- Unknown

Subfield 4: Violation Code #4
- No violation
- (Violation Code)
- Not reported
- Unknown

Rationale: Important for evaluation of safety laws and enforcement practices. This information is not available from the driver license file.

Level 4: All Drivers and Non-motorists

P18. Alcohol/Drug Suspected

Definition: Investigating police officer's assessment of whether alcohol or drugs were used by the vehicle driver or non-motorist.

Code:
- Neither alcohol nor drugs suspected
- Yes - alcohol suspected
- Yes - drugs suspected
- Yes - alcohol and drugs suspected
- Not reported
- Unknown

Rationale: Alcohol and drug related crashes remain a serious traffic safety problem. Identifying crashes in which alcohol or drugs may have been involved will help evaluate the effectiveness of programs to decrease the incidence of drunk driving or to identify problem areas.

P19. **Alcohol**

Definition: The percent of alcohol concentration.

Code: Subfield 1: Test Status
- None given
- Test refused
- Test given, contaminated sample/unusable
- Test given, results known
- Test given, results unknown
- Unknown

Subfield 2: Type of Test
- Blood
- Serum
- Breath
- Urine

Subfield 3: Test Result

Rationale: Alcohol remains the most prevalent drug involved in motor vehicle crashes. Capturing alcohol concentration whenever a driver or non-motorist is tested will provide an accurate assessment of the extent of involvement. The type of test used to obtain the alcohol concentration also is important information to collect.

P20. **Drugs**

Definition: Indication of the presence of drugs through drug testing.

Code: Subfield 1: Test Status
- Test not given
- Test given, no drugs reported
- Test given, drugs reported
- Test given, contaminated sample/unusable
- Not reported
- Unknown

Subfield 2: Type of Test
- Blood
- Urine
- Serum

Subfield 3: Test Result (Drugs regulated for commercial motor vehicle drivers and others.)
- Marijuana
- Cocaine
- Opiates
- Amphetamines
- PCP
- Other

Rationale: Drugs other than alcohol are increasingly involved in traffic crashes. Identifying drug related crashes will help develop and evaluate programs directed at reducing their involvement. Whenever evidence of other drug use is available, it should be captured.

Level 5: Non-motorists

P21. **Non-motorist Number**

Definition: The unique number assigned to the non-motorist involved in a crash.

Code: Sequential number uniquely identifying the non-motorist involved in a crash.

Rationale: Important for management/administration and evaluation. Needed to determine number and type of non-motorists involved in crash. Needed to track non-motorist preceding crash action and sustained injury.

P22. **Non-motorist Type**

Definition: The type of non-motorist involved in a crash.

Code:
Pedestrian
Pedalcyclist (bicycle, tricycle, unicycle, pedal car)
Skater
Other non-motorist (wheelchair, etc.)
Not reported
Unknown

Rationale: Used by management/administration to differentiate type of non-motorist involved in crash and to evaluate extent of non motorist involvement in motor vehicle crashes.

P23. **Non-motorist Action**

Definition: The actions of the non-motorist prior to the crash.

Code:
Entering or crossing specified location
Walking, running, jogging, playing, cycling
Working
Pushing vehicle
Approaching or leaving vehicle
Playing or working on vehicle
Standing
Other
Not reported
Unknown

Rationale: Needed to develop engineering, educational, and enforcement countermeasures to reduce non-motorist crashes.

P24. Contributing Circumstances, Non-motorist

Definition: The actions of the non-motorist which may have contributed to the crash.

Code: Subfield 1: Non-motorist Contributing Circumstances #1
- Improper crossing
- Darting
- Lying and/or illegally in roadway
- Failure to yield right of way
- Not visible (dark clothing)
- Inattentive (talking, eating, etc.)
- Failure to obey traffic signs, signals, or officer
- Wrong side of road
- Other
- Not reported
- Unknown

Subfield 2: Non-motorist Contributing Circumstances #2
- See subfield 1

Rationale: Important for evaluating the effect that dangerous or risky non- motorist behavior has on motor vehicle crashes.

P25. Non-motorist Condition

Definition: The condition of the non-motorist immediately prior to a crash.

Code:
- Apparently normal
- Physical impairment
- Emotional (e.g., depression, angry, disturbed)
- Illness
- Fell asleep, fainted, fatigue, etc.
- Under the influence of medications/drugs/alcohol
- Other
- Not reported
- Unknown

Rationale: Information about the condition of the non-motorist is needed to develop engineering, educational, and enforcement countermeasures to reduce crashes involving non-motorists. Needed to determine “fault” of crash. Needed to evaluate effect of existing, if any, countermeasures that have been applied.

P26. Non-motorist Location Prior to Impact

Definition: The non-motorist's location with respect to the roadway prior to impact.

Code:
Marked crosswalk at intersection
At intersection but no crosswalk
Non-intersection crosswalk
Driveway access crosswalk
In roadway
Not in roadway
Median (but not on shoulder)
Island
Shoulder
Sidewalk
Within 10 feet of roadway (but not shoulder, median, sidewalk, or island)
Beyond 10 feet of roadway (within trafficway)
Outside trafficway
Shared-use path or trails
Not reported
Unknown

Rationale: Preceding non-motorist location information used in developing engineering, educational, and enforcement countermeasures for both motorists and non-motorists to reduce non-motorist crashes. Needed to determine "fault" of crash. Needed to evaluate effect of existing, if any, countermeasures that have been applied.

P27. Non-motorist Safety Equipment

Definition: The safety equipment(s) used by the Non-motorist.

Code:
Subfield 1: Safety Equipment Used by Non-motorist
- None used
- Helmet used
- Protective pads used (elbows, knees, shins, etc.)
- Reflective clothing
- Lighting
- Not applicable
- Other
- Not reported
- Unknown

Subfield 2: Safety Equipment Used by non-motorist
- See Subfield 1

Rationale: Used to evaluate effectiveness of non-motorist safety equipment. Important to calculate usage statistics for the development and evaluation of effectiveness of educational countermeasures.

P28. **Number of Vehicle Striking Non-motorist**

Definition: Number assigned to identify the vehicle that struck the non-motorist in the crash.

Code: Number indicating vehicle that struck the non-motorist

Rationale: Used for tracking. Important when multiple motor vehicles are involved in crash.

Level 6: All Injured The elements in this section are to be coded only for persons injured in the crash.

P29 **Transported to Medical Facility By**

Definition: Type and identity of unit providing transport to medical facility receiving patient.

Code: Subfield 1: Source of Transport
Not transported
EMS
Police
Other
Not reported
Unknown
Subfield 2: EMS Response Agency Identifier
ID for EMS agency that responds
Subfield 3: EMS Response Run Number
Number of EMS run report
Subfield 4: Medical Facility
ID number for medical facility receiving patient

Rationale: Important to trace victim from the scene of crash through the health care system. Will facilitate linkage of injured crash victims with Emergency Medical Services data files.

DERIVED DATA ELEMENTS

Derived data elements are not collected at the scene by the police. Instead they are obtained by recoding information contained in existing data elements that have already been collected and computerized. The data element source is listed for each of the derived data elements.

Crash Derived Data Elements

CD1. **Crash Severity**

Definition: The severity of a crash based on the most severe injury to any person involved in the crash.

Source: Derived from **Injury Status (P4)** for each person involved in the crash.

Code:
Property-damage-only (none injured)
Nonfatal injury
Fatal injury
Not reported
Unknown

Rationale: Provides for the user a classification of the severity of crash without having to search through the person level records. This simplifies the use of the crash data file for producing reports by crash severity.

CD2. **Number of Vehicles**

Definition: The count of motor vehicles (e.g., automobiles, single-unit trucks, truck combinations that are in motion or on a roadway) involved in the crash.

Source: Derived by counting the number of vehicles involved in a crash as indicated in **Vehicle Unit Number (V1)**.

Code: Total Number of Vehicles

Rationale: Provides for the user a count of the number of vehicles involved in the crash without having to count the number of vehicle records. This simplifies the use of the crash data file for producing reports in which the number of involved vehicles is needed.

CD3. **Number of Motorists**

Definition: The count of motorists involved in the crash.

Source: Derived by counting the number of motorists involved in the crash as indicated in **Occupant's Vehicle Unit Number (P5) and Seating Position (P6).**

Code: Number of motorists

Rationale: Provides for the user a count of the number of motorists involved in the crash without having to count the number of motorist records. This simplifies the use of the crash data file for producing reports in which the number of motorists is needed or in identifying crashes involving motorists.

CD4. **Number of Non-motorists**

Definition: The count of non-motorists (pedestrians, pedalcyclists, etc.) involved in a crash.

Source: Derived by counting the number of non-motorists involved in the crash as indicated in **Non-motorist Number (P21)**.

Code: Number of Non-motorists

Rationale: Provides for the user a count of the number of non-motorists involved in the crash without having to count the number of non-motorist records. This simplifies the use of the crash data file for producing reports in which the number of non-motorists is needed or in identifying crashes involving non-motorists.

CD5. **Total Non-fatal Injuries**

Definition: The count of persons injured in a specific traffic crash.

Source: Derived by counting the number of persons injured in the crash from **Injury Status (P4).**

Code: Total Number of Injured Persons

Rationale: Provides for the user a count of the number of persons injured in the crash without having to search through the person level records. This simplifies the use of the crash data file for producing reports in which the number of injured persons is needed.

CD6. **Total Fatalities**

Definition: The count of fatalities (motorists and non-motorists) which resulted from injuries sustained as the result of a specific road vehicle crash. In reporting fatality statistics, a 30-day counting rule is generally used for highway safety statistics. These rules provide that only those deaths which occur within 30 days of a crash will be counted for statistical purposes.

Source: Derived by counting number of persons fatally injured in the crash from **Injury Status (P4)**.

Code: Total Number of Persons Killed Within 30 Days of Crash.

Rationale: Provides for the user a count of the number of persons fatally injured in the crash without having to search through the person level records. This simplifies the use of the crash data file for producing reports in which the number of fatalities is needed or in identifying crashes involving a fatality.

CD7. **Alcohol/Drug Involvement**

Definition: Investigating police officer's assessment of whether alcohol or drug use was suspected or demonstrated to be present by test for any vehicle driver or non-motorist in the crash.

Source: Derived from the driver and non-motorist **Alcohol/Drug Suspected (P18), Alcohol (P19), Drugs (P20)**.

Code: Neither alcohol nor other drugs
Yes (alcohol)
Yes (drugs other than alcohol)
Yes (alcohol and drugs)
Not reported
Unknown

Rationale: Provides for the user to easily identify alcohol/drug related crashes without having to search through the person level records. This simplifies the use of the crash data file for producing reports in which the number of alcohol/drug involved crashes is needed or in identifying crashes involving alcohol or drugs.

CD8. **Day of Week**

Definition: The day of the week on which a crash occurred.

Source: Derived from the **Crash Date (C2).**

Code: Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday

Rationale: Crash occurrences are often a function of day of week. This element provides this classification for the user without having to translate the date.

Vehicle Linked Data Element

This data element, sometimes collected by police on the crash report, can be obtained by linking the crash and vehicle registration data files using **Vehicle Registration State and Year (V2) and Vehicle Plate Number (V3)**. Linkage of this data element to the vehicle registration file should occur no later than at the time the crash report is added to the crash data file in order to ensure addition of the correct VIN number.

VL1. **Vehicle Identification Number**

Definition: A unique combination of alphanumeric characters assigned to a specific vehicle and formulated by the manufacturer. When the technology is available, this number also can be obtained by using a bar code reader while the vehicle is at the scene.

Code: A manufacturer assigned number permanently affixed to the vehicle.

Rationale: Important for evaluation of specific vehicle design characteristics and occupant protection systems.

Vehicle Derived Data Elements

VD1. **Vehicle Model Year**

Definition: The year which is assigned to a vehicle by the manufacturer.

Source: Derived from the 10th position of the **Vehicle Identification Number (VL1)** for 1981 to present**.** Prior to 1981, the position for the model year varied by manufacturer. This information also can be obtained separately from the Vehicle Registration File.

Code: Assigned by vehicle manufacturer

Rationale: Important for use in identifying vehicle model year, for evaluation, research and crash comparison purposes.

VD2. **Vehicle Model**

Definition: The manufacturer assigned code denoting a family of vehicles (within a make) which has a degree of similarity in construction, such as body, chassis, etc.

Source: Derived usually from positions 4, 5, 6 and 7 of the **Vehicle Identification Number (VL1)** for 1981 to present**.** Prior to 1981, the position for the model varied by manufacturer. This information also can be obtained separately from the Vehicle Registration File.

Code: Assigned by vehicle manufacturer

Rationale: Important for use in identifying vehicle model, for evaluation, research and crash comparison purposes.

VD3. **Vehicle Body Type**

Definition: The general configuration or shape or a vehicle distinguished by characteristics such as number of doors, seats, windows, roof line, hard top or convertible.

Source: Derived from the **Vehicle Identification Number (VL1).**

Code: Passenger Vehicles

AM	Ambulance
CB	Cab & Chassis (Luv)
CP	Coupe
CV	Convertible
HB	Hatchback*
HR	Hearse
HT	Hardtop*
LB	Liftback
LM	Limousine
NB	Notchback
PK	Pickup**
PN	Panel**
RD	Roadster
SB	Sport Hatchback
SC	Sport Coupe
SD	Sedan*
SV	Sport Van
SW	Station Wagon
UT	Utility**
WW	Wide Wheel Wagon
2D	Sedan, 2-door
2F	Formal Hardtop 2-door
2H(81-03)	Hatchback, 2-door
2L	Liftback 3-door
2P	Pillard Hardtop 2-door
2T	Hardtop, 2-door
2W	Wagon 2-door
3D	Runabout 3-door
4D	Sedan, 4-door
4H(81-03)	Hatchback, 4-door
4L	Liftback 5-door
4P	Pillard Hardtop 4-door
4T	Hardtop, 4-door
4W	Wagon 4-door
5D	Sedan 5-door

Trucks

AC	Auto Carrier
AR	Armored Truck
BU	Bus
CB	Chassis and cab
CC	Conventional Cab
CG	Cargo Van
CH	Crew Chassis

CL	Club Chassis
CM	Concrete or Transit Mixer
CR	Crane
CS	Super Cab / Chassis Pickup
CU	Custom Pickup
CV	Convertible (Jeep Commando, Suzuki Samurai, Dodge Dakota)
CW	Crew Pickup
CY	Cargo Cutaway
DP	Dump
DS	Tractor Truck (diesel)
EC	Extended Cargo Van
ES	Extended Sport Van
EV	Ext Van
EW	Extended Window Van
FB	Flat-bed or platform
FC	Forward Control
FT	Fire Truck
GG	Garbage or Refuse
GL	Gliders
GN	Grain
HO	Hopper
IC	Incomplete Chassis
IE	Incomplete Ext Van
LG	Logger
LL	Suburban and Carry All
MH	Motorized Home
MP	Multi-purpose
MV	Maxi Van
MY	Motorized Cutaway
PC	Club Cab Pickup
PD	Parcel Delivery
PK	Pickup
PM	Pickup with Camper mounted on bed
PN	Panel
PS	Super Cab Pickup
RD	Roadster (Jeep, Jeep Commando)
SN	Step Van
SP	Sport Pickup
ST	Stake or Rack
SV	Sports Van
SW	Station Wagon (Jeep Waggonneer, Dodge Sportsman A100, Toyota Landcruiser)
S1	One Seat
S2	Two Seat
TB	Tilt Cab
TL	Tilt Tandem
TM	Tandem

TN	Tank
TR	Tractor Truck (Gasoline)
UT	Utility (Blazer, Jimmy, Scout, etc.)
VC	Van Camper
VD	Display Van
VN	Van
VT	Vanette (including Metro and Handy Van)
VW	Window Van
WK	Tow Truck Wrecker
WW	Wide Wheel Wagon
XT	Travelall
YY	Cutaway
2W	2 Door Wagon
4W	4 Door Wagon
8V	8 Passenger Sport Van

Motorcycles

AT	All Terrain
EN	Enduro
MK	Mini-bike
MM	Mini Moto Cross
MP	Moped
MR	Mini Road/Trail
MS	Motor Scooter
MX	Moto Cross
MY	Mini Cycle
RC	Racer
RS	Road/Street
RT	Road/Trail
T	Dirt
TL	Trail/Dirt
TR	Trails

* Used only when number of doors is unknown.

** To code trucks commonly registered as passenger vehicles

Rationale: Important for use in identifying specific type of vehicle involved in a crash for evaluation and comparison purposes.

LINKED DATA ELEMENTS

Data elements obtained via linkage are not collected at the scene by the police. Instead they are generated when the crash data file is linked to another data file. The linkage source is listed for each of the categories of linked data elements.

Person Linked Data Elements

Linked person data elements are obtained by linking the crash and injury records (EMS, emergency department, and/or hospital data files) using person identifiers such as **Date of Birth (P1), Sex (P2), Transported to Medical Facility By (P29),** and crash location information including **Crash Date and Time (C2), Crash County (C3), Crash City/Place (C4), Crash Roadway Location (C5), Date and Time Crash Reported to Police Agency (C12), etc**. They are also obtained by linking the crash and driver registration files using **Driver License Number (P12)**.

Level 3: All Drivers

PL1. **Driver License Class**

Definition: The type of commercial or noncommercial vehicle that a licensed driver has been examined on and/or approved to operate.

Code:

Class “A” vehicles - any combination of vehicles with a GVWR of 26,001 or more pounds, provided the GVWR of the vehicle(s) being towed is in excess of 10,000 pounds. (Holders of Class A license may with the appropriate endorsement operate all class B & C vehicles.)

Class “B” vehicles - any single vehicle with a GVWR of 26,001 or more pounds, or any such vehicle towing a vehicle not in excess of 10,000 pounds. (Holders of Class B license may with the appropriate endorsement operate all class C vehicles.)

Class “C” vehicles - any single vehicle less than 26,001 pounds GVWR, or any such vehicle towing a vehicle not in excess of 10,000 pounds GVWR.

Class “M” vehicles - Motorcycles, Mopeds, Motor-driven cycles.

Never held a license or state can no longer provide this information

Rationale: Used to identify those drivers who were not complying with the limitations of their operators license.

PL2. **Driver License Restrictions**

Definition: Restrictions assigned to an individual's driver license by the license examiner.

Code:
None
Corrective lenses
Mechanical devices (Special brakes, hand controls, or other adaptive devices
Prosthetic aid
Automatic transmission
Outside mirror
Limit to daylight only
Limit to employment
Limited - other
Other
CDL Intrastate only
Vehicles without air-brakes
Except Class A bus
Except Class A and Class B bus
Except tractor-trailer
Farm waiver

Rationale: Used to identify drivers who with limitations on their operators license and who were involved in crashes.

PL3. **Driver License Status**

Definition: The current status of an individual's driver license.

Code:
Normal, within restrictions
Violation, beyond restrictions
Violation, under suspension
Violation, revoked
Violation, no license endorsement for this vehicle type
Violation, no license
Violation, expired license
No license required
Unknown

Rationale: Used to identify drivers involved in crashes who are not in compliance with the limitations of their operators license.

Level 6: All Injured Persons

PL4. **Injury Area**

Definition: The primary or most obvious area of the person's body injured during the crash.

Code: Types of areas are indicated by a matrix or narrative in the EMS records or as an injury or billing code (ICD-9-CM, etc.) in the emergency department, hospital or insurance records. The following list represents the major areas of the body subject to injury.

Head
Face
Neck
Thorax (chest)
Abdomen and pelvis
Spine
Upper extremity
Lower extremity
Unspecified

Rationale: This type of information will help to distinguish between multiple injured in the same crash.

PL5. **Injury Description**

Definition: Type of injury inflicted to primary **Injury Area (PL4)**.

Code: Describe injury according to data elements included in the files being linked.

Rationale: This type of information will help to distinguish between multiple injured in the same crash.

Roadway Linked Data Elements

Linked roadway data elements are generated by linking the crash to the roadway inventory and hardware data files when these data files exist in the state. The data elements used for linkage include **Crash Roadway Location (C5)** or mile marker, node, etc. depending upon the type of roadway inventory system implemented by the state.

RL1. **Bridge/Structure Identification Number**

Definition: A unique identifier assigned to a bridge, underpass, overpass, or tunnel.

Code: Number as described in *Recording and Coding guide for the Structure Inventory and Appraisal of the National's Bridges,* December 1988, Federal Highway Administration, item 8. HPMS/90, item 77.

Rationale: Identifying the bridge can link to the specific geometric data describing the bridge for problem identification analysis. Important for determining the relationship between structure characteristics and crashes.

RL2. **Horizontal Alignment**

Definition: The change in horizontal direction of a roadway, determined at the point of curvature (pc) and expressed in terms of direction, degree of curve and length.

Code:
Subfield 1: Direction
- Right
- Left

Subfield 2: Curve
- Radius

Subfield 3: Length
Subfield 4: Superelevation
Subfield 5: Unit of Measure

Rationale: Curve data is used in searching for and diagnosing high crash locations. Important for determining relationship between horizontal alignment related crashes to guide future highway design, speed limits, and driver skill training (e.g. motorcycle curve entering speed).

RL3. **Grade**

Definition: The inclination of a roadway, expressed in the rate of rise or fall in feet (meters) per 100 feet (meters) of horizontal distance.

Code:
Subfield 1: Direction of slope
- Up (+) or down (-)

Subfield 2: Percent of slope
- Nearest percent of slope

Rationale: Grade is used in diagnosing possible causes and countermeasures for a high crash site.

RL4. **Part of National Highway System**

Definition: Designation as part of the National Highway System.

Code:
Yes
No
Not reported
Unknown

Rationale: Important to monitor highway safety on National Highway System.

RL5. **Functional Classification of Highway**

Definition: The character of service or function of streets or highways. The classification of rural and urban is determined by state and local officials in cooperation with each other and approved by the Federal Highway Administration, U.S. Department of Transportation.

Code:
Rural
- Principal arterial-interstate
- Principal arterial-other
- Minor arterial
- Major Collector
- Minor Collector
- Local

Urban
- Principal arterial-interstate
- Principal arterial-other freeway or expressway
- Principal arterial-other
- Minor arterial
- Collector
- Local

Unknown

Rationale: Important for comparing crash rates/safety experience of highways of similar design characteristics so as to identify those highways or highway sections that have abnormal rates/experience for future improvements as well as generalized study of the highways in a region or state. Knowledge of the land use is needed in analyzing crashes as part of a network analysis.

RL6. **Lanes**

Definition: Total number of lanes in the trafficway, regardless of function or direction of travel, at the particular cross section of the trafficway where the crash occurred.

Code: Total number of lanes in the trafficway

Rationale: Used in studying broad categories as well as identifying the environment of a particular crash.

RL7. **Annual Average Daily Traffic**

Definition: The average number of vehicles passing a point on a trafficway in a day, for all days of the year, during a specified calendar year.

Code: Subfield 1:
Calendar year
Subfield 2:
Vehicles per day (AADT)

Rationale: Important to normalize crash data to account for the exposure.

RL8. **Trafficway Description**

Definition: Indication of whether or not a trafficway is divided and whether it serves one-way or two-way traffic. (A divided trafficway is one on which roadways for travel in opposite directions are physically separated by more than an easily traversable centerline.)

Code: Two-way, not divided
Two-way, divided, unprotected median
Two-way, divided, positive median barrier
One-way, not divided
Not reported
Unknown

Rationale: Used in classifying crashes as well as identifying the environment of a particular crash. Note that data must be in a road inventory file or collected by the reporting officer. It is not readily derived from the other road data such as classification or route. Important to guide future trafficway design and traffic control.

RL9. **Average Widths of the Shoulder(s) and Lane(s)**

Definition: Average widths of the lane(s) and of the shoulder(s) where crash occurred.

Code: Subfield 1: Average lane width in feet
Subfield 2: Average shoulder width in feet

Rationale: Important to monitor the association of shoulder/lane widths and the frequency of crashes.

RL10. **Average Width of Median**

Definition: Average width of portion of divided highway separating the traveled way for traffic in opposing directions where crash occurred.

Code: Average width of median in feet (meters)

Rationale: Important to monitor the unmet need for medians to protect motorists from oncoming traffic.

RL11. **Access Control**

Definition: The degree that access to abutting land in connection with a highway is fully, partially or not controlled by public authority.

Code: Full Access Control
Partial access Control
No Access Control

Rationale: Access control is highly correlated with crash rates. Road inventory files or police reported data on access control is used in identifying high hazard locations. Important to guide future highway design and traffic control.

RL12. **RR Crossing ID**

Definition: A unique number assigned to a railroad crossing by a state highway agency in cooperation with the American Association of Railroads for identification purposes. (US DOT/AAR number)

Code: State specific number assigned by a state in cooperation with the American Association of Railroads

Rationale: The data is used in high crash locations as well as high risk corridors. Important for determining the need for additional controls and evaluating the efficacy of various types of controls.

RL13. **Roadway Lighting**

Definition: The type of roadway illumination on the roadway.

Code: No lighting
Spot illumination

Continuous lighting

Rationale: Lighting is recognized as having a benefit to safe highway operations. The presence of lighting is an important element in analysis of a spot location, a section of highway, or a network analysis. Important for determining the affects of highway illumination on nighttime crashes to guide future installations.

RL14. **Pavement Markings, Longitudinal**

Definition: The longitudinal markings (paint, plastic, or other) used on the roadway surface to guide or control the path followed by drivers.

Code: Subfield 1: Function and Color

- Centerline, skip-dash, yellow
- Centerline, solid, yellow
- Centerline, solid double, yellow
- No passing barrier, right or left, yellow
- Lane line, skip-dash, white
- Lane line, solid, white
- Edge line, left, yellow
- Edge line, right, white
- Left turn lane lines, combination of solid and skip-dash, yellow
- Turn arrow symbols, right, through, left, or combination of two
- Not reported
- Unknown

Subfield 2: Material

- Paint
- Thermoplastic
- Raised markers
- Permanent inlay
- Tape
- Other
- Not reported
- Unknown

Rationale: Knowledge of the existence of pavement markings is necessary to the analysis of crash data. Important for determining the affects of various types of longitudinal markings on various types of crashes to guide future applications.

RL15. **Bikeway**

Definition: Any road, path, or way which in some manner is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

Code: No Bikeway
Bicycle Route (signed)
Bicycle Lane (striped) - right only
Bicycle Lane (striped) - both sides
Bicycle Lane (striped) - left only
Separate Bicycle Path/Trail
Not reported
Unknown

Rationale: Needed to determine usage of bicycle facilities. Needed to determine location of bicycle crashes in relation to bicycle facility. Information is used to design facilities to more safely accommodate both bicycles and motor vehicles. Important for ascertaining the relative safety performance of various types/classes of bike paths to guide future design/operation decisions.

RL16. **Delineator Presence**

Definition: The presence or absence of a series of reflecting devices mounted at regular intervals along the side of the road to indicate the alignment of the roadway.

Code: None
Delineators, right
Delineators, left
Delineators, both sides
Not reported
Unknown

Rationale: Important for determining the effectiveness of delineation on night time and run-off-the-road crashes and guide future installations.

RL17. **Intersection Type**

Definition: The type of intersection at which two or more roadways intersect at the same level.

Code: 4-legged
Greater than 4 legs
Tee
Y

Rationale: Important for determining types of intersections where crashes occur.

RL18. **Traffic Control Type at Intersection**

Definition: Type of traffic control device at intersection where crash occurred.

Code:
No control
Stop signs on cross street only
Stop signs on mainline only
Four-way stop signs
Four-way flasher (Red on cross street)
Four-way flasher (Red on mainline)
Four-way flasher (Red on all)
Yield signs on cross street only
Yield signs on mainline only
Signals pretimed (2 phase)
Signals pretimed (multi-phase)
Signals semi-actuated (2 phase)
Signals semi-actuated (multi-phase)
Signals fully-actuated (2 phase)
Signals fully-actuated (multi-phase)
Other
Unknown

Rationale: Important to understand the relationship between crashes at intersections and the type of traffic control device present.

RL19. **Mainline Number of Lanes at Intersection**

Definition: Number of "thru" lanes on the mainline approaches of an intersection, including all lanes with "thru" movement ("thru" and left-turn, or "thru" and right-turn) but not exclusive turn lanes.

Code:
One lane
Two lane
Three lanes
Four to six lanes
Seven to nine lanes
Unknown

Rationale: Important to describe the intersection.

RL20. **Side-Road Number of Lanes**

Definition: Number of "thru" lanes on the side-road approaches at intersection including all lanes with "thru" movement ("thru" and left-turn, or "thru" and right-turn) but not exclusive turn lanes.

Code:
One lane
Two lane

Three lanes
Four to six lanes
Seven to nine lanes
Unknown

Rationale: Important to describe the intersection.

RL21. **Mainline Approach Volumes**

Definition: Total traffic volume for the mainline approaches of an intersection.

Code: Report actual or estimated traffic volume expressed as an average annual daily count.

Rationale: Important to understand volume of crashes in relation to exposure for the mainline approaches

Glossary

Access Control	The degree that access to abutting land in connection with a highway is fully, partially, or not controlled by public authority.
Activity Area	An activity area is where work takes place within a work zone area.
Advance Warning Area	An advance warning area tells traffic what to expect ahead within a work zone area.
Air Bag Deployed	Deployment status of an air bag relative to position of the occupant.
Alcohol	The percent of alcohol concentration.
Alcohol/Drug Involvement	Investigating police officer's assessment of whether alcohol or drug use was suspected or demonstrated to be present by test for any vehicle driver or non-motorist in the crash.
Alcohol/Drug Suspected	Investigating police officer's assessment of whether alcohol or drugs were used by the vehicle driver or non-motorist.
Alignment	The geometric characteristics or layout of a roadway. Alignment is usually subdivided into horizontal and vertical alignment.
Alphanumeric Identifier	Consisting of alphabetic and numerical symbols.
Ambient Light	The type of light that exists at the time of a motor vehicle crash.
Angle - Force of Collision	The angle of the direction of the force in which two or more vehicles initially came together.
Angle - Manner of Impact	A crash where two vehicle impact at an angle. For example, the front of one vehicle impacts the side of another vehicle.
Animal	Creatures which have the capacity for movement and motor response to stimulation but are not human beings.
Annual Average Daily Traffic	The average number of vehicles passing a point on a trafficway in a day, for all days of the year, during a specified calendar year.
Apparently Normal	Driver does not appear to be in an abnormal physical or mental state.

Approaching or Leaving Vehicle	Physical movement in the direction of or in the direction away from the vehicle.
At Intersection but No Crosswalk	At an area which contains a crossing or connection of two or more roadways not classified as a driveway access but without the street crossing distinctly indicated for pedestrian crossing by lines or other markings on the surface of the roadway.
Auto Transporter	A single-unit truck, truck/trailer, or tractor/semi-trailer having a cargo body specifically designed to transport other motor vehicles. This includes flatbed and standard body tow trucks.
Auxiliary Lane	The portion of the roadway adjoining the through traveled way for parking, speed change, turning, storage for turning, weaving, truck climbing, or for other purposes supplementary to through traffic movement.
Backing	A start from a parked or stopped position in the direction of the rear of the vehicle.
Barrier	A device which provides a physical limitation through which a vehicle would not normally pass and is designed to contain or redirect an errant vehicle.
Bicycle Violation	The disregard intentionally or unintentionally of the rules or laws governing the operation of a pedalcycle as a transport device in the location where the violation occurred.
Bikeway	Any road, path, or way which in some manner is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.
Blowing Sand, Soil, Dirt, Snow	Sand, soil , dirt, or snow moved or carried by wind. (See definition of sand, dirt, and snow elsewhere.)
Bridge	A structure, including supports, carrying a roadway, railroad etc. over an obstruction such as water, a railway, or another roadway, having an opening of 20 feet (6 m) or more measured along the center of the structure.

Bridge - Overhead Structure	Any part of a bridge that is over the reference or subject roadway. In crash reporting, this typically refers to the beams or other structural elements supporting a bridge deck.
Bridge - Parapet End	A low wall built along the edge of a bridge deck.
Bridge - Pier or Abutment	A bridge pier is a support for a bridge structure other than at the ends. A bridge abutment is the end support for a bridge.
Bridge - Rail	A barrier attached to a bridge deck or a bridge parapet to restrain vehicles, pedestrians or other users.
Bump	A relative abrupt protrusion in the road.
Canadian Province	A territory governed as a political unit of Canada.
Cargo Body Type	Coded for buses and trucks over 10,000 pounds GVWR.
Cargo/Loss or Shift	The release of the goods being transported from the cargo compartment of the truck, or the change in the position of the goods within the cargo compartment.
Cargo Released	The goods being transported by truck spilled out of the vehicle cargo compartment.
Cargo Tank	A single-unit truck, truck/trailer, or tractor/semi-trailer having a cargo body designed to transport either dry bulk (fly ash, etc.), liquid bulk (gasoline, milk, etc.), or gas bulk (propane, etc.).
Carrier Identification Number	A unique number, found on the power unit, and assigned by the U.S. Department of Transportation, Interstate Commerce Commission, or by the state to a motor carrier.
Carrier Name	The name of an individual, partnership or corporation responsible for the transportation of persons or property.
Carrier Name Source	Where the name of the motor carrier was noted, be it the power unit of the truck, the trailer, the shipping papers, or other documents.
Carrier Street Address	The street address of the carrier.
Center Line	A yellow pavement marking used to separate traffic traveling in opposite directions. A center line need not be at the geometrical center of the pavement.

Center Line, Broken	A single yellow broken line is used where passing is permitted.
Center Line, Double	A double yellow solid line is used where passing is prohibited.
Center Line, Solid and Broken Line	A broken yellow line and a solid yellow line are used where passing in permitted in one direction.
Changing Lanes	A vehicle shift from one traffic lane to another traffic lane moving in the same direction.
Child Safety Seat Used	Child passenger was seated in a child safety seat. This does not imply correct use or placement of the child safety seat.
Cited	Receipt of a motor vehicle citation for actions as a result of a motor vehicle crash.
Clear	Free from clouds, fog, smoke.
Cloudy	Overcast with clouds. (Cloud - a visible mass of particles of water or ice in the form of fog, mist, or haze suspended usually at a considerable height in the air.)
Collision	A road vehicle crash other than an overturning crash in which the first harmful event is a collision of a road vehicle in transport with another road vehicle, other property, animal or pedestrian.
Collision With Fixed Object	A collision crash in which the first harmful event is the striking of a fixed object by a road vehicle in transport**.**
Collision With Object Not Fixed	A collision crash in which the first harmful event is the striking by a road vehicle in transport of an object that is not fixed.
Compartment Intrusion	**Amount of vehicle which intrudes into the occupant compartment as the result of a crash.**
Concrete Mixer	**A single-unit truck with a body specifically designed to mix or agitate concrete.**
Construction Zone	See Work Zone.
Contributing Circumstances, Driver	The actions of the driver which may have contributed to the crash.
Contributing Circumstances, Environment	Apparent environmental conditions which contributed to the crash.

Contributing Circumstances, Non-motorist	The actions of the non-motorist which may have contributed to the crash.
Contributing Circumstances, Road	Apparent condition of the road which contributed to the crash.
Crash Case Number	Unique identifier within a given year that identifies a given crash.
Crash City/Place	The city/place in which the crash occurred.
Crash County	The county in which the crash occurred.
Crash Date and Time	The date (year, month, and day) and time (hour and minute) at which the crash occurred.
Crash Roadway Location	Exact location on the roadway indicating where the crash occurred.
Crash Severity	The severity of a crash based on the most severe injury to any person involved in the crash.
Crossover	Area in the median of a divided roadway where vehicles are permitted to travel cross the opposing lanes of traffic or do a U-turn.
Culvert	An enclosed structure providing free passage of water under a roadway with a clear opening of twenty feet (6 m) or less measured along the center of the roadway.
Curb	A raised edge or border to a roadway. Curbs may be constructed of concrete, asphalt, or wood and typically have a face height of less than 9 inches (225 mm).
Dark - Lighted Roadway	It is dark but the roadway is lighted by lights designed and installed to illuminate the roadway. This is not lighting from store front, house lamps, etc.
Dark - Roadway Not Lighted	It is dark and the roadway is not lighted by lights designed and installed to illuminate the roadway.
Dark - Unknown Roadway Lighting	It is dark and it is unknown if the roadway was lighted by lights designed and installed to illuminate the roadway.
Dart Out	Pedestrian enters street quickly and is struck by or walks or runs into a moving vehicle.
Date and Time Crash Reported to Police Agency	The date and time at which the call was placed notifying the police agency about the crash.

Date of Birth	Year, month, and day of birth of person involved in crash.
Dawn	The first appearance of light in the morning.
Day of Week	The day of the week on which a crash occurred.
Daylight	The light of day.
Debris	The remains of something broken or destroyed.
Deployed Air Bag-Driver	Driver air bag out of its cover and protruding into driver compartment. Bag is fully or partially deflated or inflated.
Deployed Air Bag-Front Seat Passenger	Front seat passenger air bag out of its cover and protruding into front seat passenger compartment. Bag is fully or partially deflated or inflated.
Deployed Side Air Bag	Air bag on side of vehicle is out of its cover and protruding into occupant compartment. Bag is fully or partially deflated or inflated.
Deployment of Air Bag	Air bag out of its cover and protruding into occupant compartment. Bag is fully or partially deflated or inflated.
Deployment of Air Bag unknown	Not known if air bag is out of its cover and protruding into occupant compartment.
Derived Data Elements	Derived data elements are not collected at the scene by the police. Instead they are obtained by counting or recoding information contained in existing data elements that have already been collected and computerized.
Direction of Travel Before Crash	The direction of a vehicle's normal, general travel on the roadway before the crash. Notice that this is not a compass direction but a direction consistent with the designated direction of the road. For example, the direction of a state designated north-south highway must be either northbound or southbound even though a vehicle may have been traveling due east as a result of a short segment of the highway having an east-west orientation.
Disabling Damage	Damage which precludes departure of the vehicle from the scene of the crash in its usual daylight operating manner after simple repairs.

Disregarded Traffic Signs, Signals, Road Markings	Driver failed to comply with the instructions directed by traffic signs, signals, or road markings.
Ditch	Channel dug into the ground.
Downhill Runaway	A motor vehicle that is moving down a hill without the ability to stop.
Driver	An occupant who is in actual physical control of a transport vehicle or, for an out-of-control vehicle, an occupant who was in control until control was lost.
Driver Condition	The condition of the driver which may have contributed to the crash.
Driver Distracted	Determination that occupant who is in actual physical control of a transport vehicle had his/her attention diverted from driving.
Driver License Class	The type of commercial or noncommercial vehicle that a licensed driver has been examined on and/or approved to operate.
Driver License Number	A unique number assigned by the authorizing agent issuing a driver license to the individual.
Driver License Restrictions	Restrictions assigned to an individual's driver license by the license examiner.
Driver License State/Province	The geographic or political entity issuing a driver license. Includes states of the United States, including D.C., Indian Nations, U.S. Government, Canadian provinces, and Mexican states.
Driver License Status	The current status of an individual's driver license.
Driver Name	The full name of the individual driver.
Driveway	A roadway providing access to property adjacent to a trafficway.
Driveway access crosswalk	Crosswalk on roadway providing access to property adjacent to a trafficway.
Driving Too Fast for Conditions	Traveling at a speed that was unsafe for the road, weather, traffic or other environmental conditions at the time.
Drugs	Indication of the presence of drugs through drug testing.
Dry	Free from water or liquid.

Dump Truck	A truck which can be tilted or otherwise manipulated to discharge its load by gravity.
Dusk	The darker part of twilight at night.
Edge Line	A pavement marking used to mark the edge of pavement for driver guidance.
Ejection	The location of each occupant's body as being completely or partially thrown from the vehicle as a result of a crash.
Embankment	A structure of soil or rock above the original ground upon which a pavement structure is constructed.
Emergency Use	Indicates vehicles, such as military, police, ambulance, fire, etc., which are on an emergency response. Emergency refers to a vehicle that is traveling with physical emergency signals in use; typically red light blinking, siren sounding, etc. Code yes only if the vehicle was on an emergency response.
Emotional Illness	Behavior which indicates depression, anger, emotional disturbance, etc.
EMS Response Agency Identifier	ID for EMS Agency that responds.
EMS Response Run Number	Number on EMS run report.
Entering or Crossing Specified Location	Non-occupant went into or crossed over a specific identified area that was either was or was not part of the trafficway or roadway.
Entering Traffic Lane	Physical presence in trafficway.
Exceeded Authorized Speed Limit	Driver was operating vehicle faster than posted speed limit at time of crash.
Extricated by Mechanical Means	Person was removed from vehicle by mechanical means such as the "jaws of life", K-saw, etc.
Failure to Keep In Proper Lane or Running Off Road	Driver did not maintain position in appropriate travel lane or moved off of that part of a trafficway which includes both the roadway and any shoulder alongside the roadway.
Failure to Obey Traffic Signs, Signals, or Officer	Non-motorist did not comply with the instructions directed by traffic signs, signals, or a police officer at the scene.

Failed to Yield Right of Way	Driver did not give way to another vehicle or non-occupant as required.
Farm Waiver	Waiver granted for the operation of farm vehicles.
Fatal Injury	Any injury that results in death within a 30 day period after the crash occurred.
Fell Asleep, Fainted, Fatigue, Etc.	Driver experienced a temporary loss of consciousness or was operating in a reduced physical and mental capacity due to weariness, medication, or other drugs.
FIPS Code	Federal Information Processing Standards for coding states, counties, and cities.
Fire/Explosion	Fire/explosion which was the cause or product of the crash.
First Event	Occurrence which was the first thing that happened to the vehicle, relevant to the crash.
First Harmful Event	The injury or damage producing event which characterizes the crash type and identifies the nature of the first harmful event.
Five-Point, or More-Intersection	An intersection where more than two roadways cross or connect.
Flashing Traffic Control Signal	Traffic control signal that is flashing or a single light flashing red or yellow.
Flatbed	A single-unit truck, truck/trailer, or tractor/semi-trailer whose body is without sides or roof, with or without readily removable stakes which may be tied together with chains, slats, or panels. This includes trucks transporting containerized loads.
Fog, Smog, Smoke	Fog - a vapor condensed to fine particles of water suspended in the lower atmosphere that differs from cloud only in being near the ground. Smog - a fog made heavier and darker by smoke and chemical fumes. Smoke - the suspension of solid particles of combustion in the atmosphere.
Followed Too Closely	Driver was positioned too near another vehicle or non-occupant to permit safe response to any change in movement or behavior of the other vehicle or non-occupant.

Force of Collision	The direction of the force in which vehicles initially came together.
Four-Way Intersection	An intersection where two roadways cross or connect.
Fourth Event	Occurrence which was the fourth thing that happened to the vehicle in question that was relevant to the crash.
Freed by Non-Mechanical Means	Person was removed from trapped condition in vehicle using non-mechanical means.
Freezing Rain or Drizzle	Water which is freezing once it hits the ground.
Front Seat - Left Side	Driver seat for motor vehicle or motorcycle.
Front Seat - Right Side	Passenger seat to right of driver and next to the door.
Front Seat - Middle	Passenger seat between driver and right seat passenger.
Full Access Control	Authority to control access is exercised to give preference to through traffic by providing access connections with selected public roads only, by prohibiting crossings at grade or direct private driveway connections.
Functional Classification	The character of service or function of streets or highways. The classification of rural and urban is determined by state and local officials in cooperation with each other and approved by the Federal Highway Administration, U. S. Department of Transportation.
Functional Damage	Damage which is not disabling, but affects operation of the road vehicle or its parts.
Garbage/Refuse	A single-unit truck having a body specifically designed to collect and transport garbage or refuse.
Geographic Information System (GIS)	System which associates information with specific geographic locations, for example roadway characteristics by latitude/longitude.
Glare	A harsh uncomfortably bright light.

Global Positioning System (GPS)	Geographic location indicated in terms of latitude and longitude.
Gore	A gore is an area of land where two roadways diverge or converge. The area is bounded on two sides by the edges of the roadways, which join at the point of divergence or convergence. The direction of traffic must be the same on both sides of these roadways. The area includes shoulders or marked pavement, if any, between the roadways. The third side is 200 feet (60 meters) from the point of divergence or convergence or, if any other road is within 230 feet (70 meters) of that point, a line 33 feet (10 meters) from the nearest edge of such road.
Grade	The inclination of a roadway, expressed in the rate of rise or fall in feet (meters) per 100 feet (meters) of horizontal distance.
Grain/Chips/Gravel Truck	Truck with closed sides and bottom to carry grain, chips, gravel, etc.
Gross Vehicle Weight Rating of Power Unit	A gross vehicle weight rating (GVWR) is a value specified by the manufacturer for the power unit of a motor vehicle.
Guardrail (Guiderail)	A longitudinal barrier consisting of posts and rails or cables.
Guardrail End	The first or last 25 feet (7.6 m) of a guardrail measured from the end post.
Guardrail Face	The side of the primary longitudinal element of a guardrail nearest traffic.
Hail	Precipitation in the form of small balls or lumps usually consisting of concentric layers of clear ice and compact snow.
Hazardous Materials	Any substance or material which has been determined by the U.S. Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and which has been so designed under regulations of the US DOT.

Hazardous Materials Placard (Cargo Only)	A diamond shaped sign that must be affixed to any motor vehicle that carries hazardous materials usually contains a four digit number in the middle of the placard and a one digit number at the bottom that indicate the hazard class and specific material being carried.
Hazardous Materials Released Involvement (Cargo Only)	Indication whether hazardous materials were released from the cargo compartment.
Head-on - Force of Collision	A crash in which the direction of force causes the vehicle to move forward head first.
Head-on - Manner of Impact	A crash where the front end of two vehicles impact.
Helmet used	Safety helmet was worn by non-motorist or driver.
Highway, Street or Road	A general term denoting a public way for purpose of vehicular travel, including the entire area within the right-of-way. (Recommended usage: in urban areas - highway or street, in rural areas - highway or road.)
Highway Traffic Sign Post	A pole, post, or structure constructed to support a highway sign intended to guide, regulate, or inform highway users.
Holes	An opening in the road.
Horizontal Alignment	The change in horizontal direction of a roadway, determined at the point of curvature (pc) and expressed in terms of direction, degree of curve and length.
ICC	Interstate Commerce Commission (defunct since 1996).
Ice	Frozen water.
Identification Number	Unique number that identifies a person, crash, vehicle, bridge/structure, etc.
Immersion	Object or person covered completely by liquid.
Impact Attentuator/Crash Cushion	A barrier at a spot location, less than 25 feet (7.6 m), designed to prevent an errant vehicle from impacting a fixed object hazard by gradually decelerating the vehicle to a safe stop or by redirecting the vehicle away from the hazard.

Improper Action	Action contrary to motor vehicle rules.
Improper Crossing	Crossing a trafficway against the rules.
In Roadway	Physically located in that part of trafficway designed, improved, and ordinarily used for motor vehicle travel.
Inattention	Lack of concentration or observation.
Indian Tribe	Designation as member of federally recognized Indian Tribe.
Injury Area	The primary or most obvious area of the person's body injured during the crash.
Injury Description	Type of injury.
Injury Status	The level of injury severity for a person involved in the crash.
International License (other than Mexico, Canada)	Driver license issued by country other than Canada, Mexico or U.S.
Intersection Type	The type of intersection at which two or more roadways intersect at the same level.
Island	Cement or grassy area in the middle of a trafficway.
Issuing Authority	Organizational entity with the power to license.
Jackknife	An event involving a truck pulling a semi-trailer or semi-trailers and trailers where the trailing unit(s) and the pulling vehicle rotate with respect to each other.
Junction	A junction is either an intersection or the connection between a driveway access and a roadway other than a driveway access.
Lane	A strip of roadway used for a single line of vehicles.
Lane Line	A pavement marking used to separate traffic traveling in the same direction. Lane lines are normally 4 to 6 inches (100 to 150 mm) wide.
Lane Line, Broken	A lane line which permits lane changing with care.
Lane Line, Double	A double lane line is used to prohibit lane changing.
Lane Line, Solid	A solid lane line is used to discourage lane changing.

Lap Belt Only Used	Use of or presence of only a lap safety belt either because vehicle is equipped only with lap belt or because shoulder belt is not in use.
Leaving Traffic Lane	Vehicle or person moving outside traffic lane.
Light Truck with only four tires	Trucks (van, mini-van, panel, pickup, sport utility) of 10,000 pounds gross vehicle weight rating or less.
Lighting	Non-motorist use of lights on his/her person or on a vehicle not in transport or transport vehicles other than motor vehicle as safety equipment.
Logbook	A document carried in the truck cab or bus in which commercial motor vehicle drivers must enter their record of duty status for each 24 hour period using methods proscribed by the US DOT.
Longitudinal Barrier	A barrier designed to shield errant vehicles from hazardous areas that extend more than 25 feet (7.6 m) along a roadway.
Luminaire	A complete lighting unit consisting of a lamp or lamps together with the parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply.
Luminaire/Light Support	A pole or post constructed to support a luminaire for lighting a highway.
Lying/Illegally in Roadway	Person physically located in that part of trafficway designed, improved, and ordinarily used for motor vehicle travel.
Made Improper Turn	Driver turned vehicle incorrectly or not suitably to the circumstances.
Mainline	Roadway with the higher volume compared to another roadway.
Mainline Approach Volumes	Total traffic volume for the mainline approaches.
Mainline Number of Lanes at Intersection	Number of “thru” lanes on the mainline approaches at intersection including all lanes with “thru” movement (“thru” and left-turn, or “thru” and right-turn) but not exclusive turn lanes.
Maintenance Zone	See Work Zone.
Manner of Impact	The identification in a crash of the manner in which two vehicles in transport initially came together without regard to the direction of force.

Marked Crosswalk at Intersection	That portion of the roadway at the intersection that is distinctly indicated for pedestrian crossing by lines or other markings on the surface of the roadway.
Median	The portion of a divided highway separating the traveled way for traffic in opposing directions.
Medical Facility	ID Number for Medical Facility Receiving Patient.
Most Harmful Event for this Vehicle	Event which produced the most severe injury or greatest property damage for this vehicle.
Motor Home	A van where a frame-mounted recreational unit is added behind the driver or cab area or mounted on a bus/truck chassis.
Motor Vehicle Collision	An crash in which the first harmful event is the collision of two or more motor.
Motor Vehicle Crash	A motor vehicle crash is a transport crash that (1) involves a motor vehicle in transport, (2) is not an aircraft crash or watercraft crash, and (3) does not include any harmful event involving a railway train in transport prior to involvement of a motor vehicle in transport.
Motor Vehicle In Transport	Motor vehicle - any motorized (mechanically or electrically powered) road vehicle not operated on rails. In Transport - means in motion or on a roadway. Inclusions: motor vehicle in traffic on a highway, driverless motor vehicle in motion, motionless motor vehicle abandoned on a roadway, disable motor vehicle on a roadway, etc.
Motorcycle	A two- or three-wheeled motor vehicle designed to transport one or two people. Included are motor scooters, minibikes, and mopeds.
Motorist	Any occupant of a motor vehicle in transport.
MMUCC	Model Minimum Uniform Crash Criteria
No Access Control	Includes all sections that do not meet the criteria for full or partial access control.
No Improper Driving	Driver operated vehicle in an apparently correct manner.
Non Collision	Any road vehicle crash other that involving a collision crash.

Non-Fatal Injury	Bodily harm to a person.
Non-Highway Work	Work on the roadside but not related to the roadway. For example, workers mowing the roadside, utility workers working on utility poles adjacent to roadway.
Non-intersection Crosswalk	A portion of the roadway, not at an intersection, that is distinctly indicated for pedestrian crossing by lines or other markings on the surface of the roadway.
Non-motorist	Any person other than an occupant of a motor vehicle in transport. This includes pedestrians, occupants of other motor vehicles not in transport and occupants of transport vehicles other than motor vehicles.
Non-motorist Action	The actions of the non-motorist prior to the crash.
Non-motorist Condition	The condition of the non-motorist immediately prior to a crash.
Non-motorist Location Prior to Impact	The non-motorist's location with respect to the roadway prior to impact.
Non-motorist Number	The unique number assigned to the non-motorist involved in a crash.
Non-motorist Safety Equipment	The safety equipment(s) used by the non-motorist Including retro-reflective clothing, lighting, protective pads, helmet, etc.
Non-motorist Type	Type of non-motorist involved in a crash (pedestrian, pedalcyclist, skater, etc.)
Number of Vehicles	The count of motor vehicles (e.g. automobiles, single-unit trucks, truck combinations that are in motion or on a roadway) involved in the crash.
Number of Vehicle Striking Non-motorist	The number assigned to identify the vehicle that struck the non-motorist in the crash.
Number of Motorists	The count of motorists involved in the crash.
Number of Non-motorists	The count of non-motorists (pedestrians, pedalcyclists, etc.) involved in a crash.
Obstruction in Roadway	A blockage in roadway.

Occupant Protection System Use	The restraint equipment in use by occupant at the time of the crash, or the helmet use by a motorcyclist.
Off Ramp	An auxiliary roadway used for leaving through-traffic lanes.
On Ramp	An auxiliary roadway used for entering through-traffic lanes.
ON-OFF Switch (Air Bag Deployed)	A switch that activates-deactivates the front seat passenger or driver air bag.
Operating Defective Equipment (Driver)	Vehicle in transport or any part or component of vehicle in transport is deficient, faulty, incomplete or incapacitated.
Operating Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	Operating the vehicle without regard to the safety of occupants, non-occupants or property.
Other Non-Fixed Object - Collision With	A collision with an object other than a motor vehicle in transit, a pedestrian, an other road vehicle in transit, a parked motor vehicle, a railway vehicle, a pedalcycle, an animal, or a fixed object.
Outside Trafficway	Not physically located on any land way open to the public as a matter of right or custom for moving persons or property from one place to another.
Overcorrecting/ Oversteering	Wide swing of vehicle to right or left because of sliding, etc. or to compensate for obstacle in roadway.
Overhead Sign Support	A pole, post, or structure constructed to support a sign which is over a roadway.
Overtaking/Passing	A vehicle that moves from behind a vehicle to in front of the same vehicle.
Overturn/Rollover	A vehicle that has overturned at least 90 degrees to its side.
Parked Motor Vehicle	A motor vehicle not in transport.
Parking Lane	An auxiliary lane primarily for the parking of vehicles.

Partial Access Control	Authority to control access is exercised to give preference to through traffic to a degree that, in addition to access connections with selected public roads, there may be some crossings at grade and some private driveway connections. However, these direct private driveway connections have been minimized through the use of frontage roads or other local access restrictions.
Partially Ejected	The location of an occupant's body not completely thrown from the vehicle as a result of a crash.
Passenger	Occupant of vehicle other than the driver of the vehicle.
Passenger Car	Motor vehicles used primarily for carrying passengers.
Pavement Markings	Markings set into the surface of, applied upon, or attached to the pavement for the purpose of regulating, warning, or guiding traffic. Markings are typically paint, or plastic but may be devices of various materials.
Pavement Markings, Longitudinal	The longitudinal markings (paint, plastic, or other) used on the roadway surface to guide or control the path followed by drivers.
Pedalcyclist	Any occupant of a pedalcycle (bicycle, tricycle, unicycle, pedal car).
Pedestrian	Any person on foot on a roadway.
Person Type	Type of person involved in a crash.
Physical Impairment	A condition that results in some decrease in a physical ability.
Physical Obstruction - Contributing Circumstances	An object which blocked sight and contributed to the crash. (For example, bush, tree, etc.)
Placard Number	A number included on the hazardous material placard displayed on trucks that are carrying hazardous materials. Many placards have two numbers, a four digit number in the middle, and a one digit number at the bottom.
Playing or Working on Vehicle	Non-motorist, such as a child or mechanic, touching vehicle.

Point of Impact	The portion of the vehicle that impacted first in a crash.
Pole Trailer	A trailer designed to be attached to the towing vehicle by means of a reach or pole, or by being boomed or otherwise secured to the towing road vehicle, and ordinarily used for carrying property of a long or irregular shape.
Police Reporting Agency Identifier	A unique identifier for the police agency who provided information on the crash report.
Police Agency - Source of Information	Police officer provided the information on the crash report.
Property Damage Only	Crash in which at least one vehicle is damaged but no occupants or non-motorists are injured.
Protective Pads Used	Padded, shaped attachments to protect specific areas of the body (elbows, knees, shins, etc.) from injury, usually when skating.
Railway Crossing Device	Any sign, signal, or gate which warns of on-coming trains or train tracks crossing the roadway.
Railway Crossing ID	A unique number assigned to a railroad crossing by a state highway agency in cooperation with the American Association of Railroads for identification purposes. (US DOT/AAR number)
Railway Grade Crossing	A intersection between a roadway and train tracks which cross each other at the same level (Grade).
Railway Vehicle	Any land vehicle (e.g., train, engine) that is (1) designed primarily for , or in use for, moving persons or property from one place to another on rails and (2) not in use on a land way other than a railway.
Railway Vehicle - Collision With	A collision crash in which the first harmful event is the collision of a road vehicle in transport and railway vehicle (e.g., train, engine).
Rain	Water falling in drops condensed from vapor in the atmosphere.

Raised Pavement Marker	An individual unit marker, reflectorized or non-reflectorized, generally less than one-inch (25 mm) in height, attached to and extending above the normal pavement surface for the purpose of regulating, warning, or guiding traffic.
Ran Off Road	Failure of the driver to keep the vehicle within the roadway traffic lanes.
Rear-End - Manner of Impact	A crash where the front of one vehicle impacts the back of another vehicle.
Rear-to-rear - Manner of Impact	A crash where the backs of two vehicles impact.
Relation to Roadway	The location of the first harmful event as it relates to its position within or outside the trafficway.
Retro-Reflective Clothing	Clothing which reflects light and also returns most of that reflection back along the path of the incoming light.
Riding on Vehicle Exterior	Person outside of vehicle (on hood, running board, trunk, non-trailing unit, etc.) while riding.
Road Surface Condition	The roadway surface condition at the time and place of a crash.
Road Under Construction/ Maintenance	Roadway being constructed or resurfaced.
Roadside	The outermost part of the trafficway from the property line to other boundary in to the edge of the first road.
Roadway	That part of a trafficway designed, improved, and ordinary used for motor vehicle travel or, where various classes of motor vehicle are segregated, that part of a trafficway used by a particular class. Separate roadways may be provided for northbound and southbound traffic or for trucks and automobiles. Bridle paths and bicycle paths are not included in this definition.
Roadway - Crash on	(1) a collision crash in which the initial point of contact between colliding units in the first harmful event is within a roadway or (2) a non-collision crash in which the road vehicle involved was partly or entirely on the roadway at the time of the first harmful event.

Roadway Lighting	The type of roadway illumination on the roadway.
Roadway Surface Condition	The roadway surface conditions at the time and place of a crash.
Rut	Track worn by wheel or by habitual passage in the road.
Sand, Mud, Dirt, Oil, Gravel	Sand - loose granular material resulting from the disintegration of rock on the road. Mud - slimy sticky mixture of soil and water on the road. Dirt - loosed or packed soil on the road. Oil - substance that is liquid and soluble in ether but not in water. Gravel - loose rounded fragments of rock on the road.
School Bus	A motor vehicle used for the transportation of any school pupil at or below the 12th-grade level to or from a public or private school or school-related activity, if it is externally identifiable by the color yellow, the words “school bus” , flashing red lights are located on the front and rear, and identifying lettering on both sides indicating the school or school district served, or the company operating the bus.
School Bus Related Crash	A motor vehicle crash in which a school bus, with or without a pupil on board, is involved directly as a contact vehicle or indirectly as a noncontact vehicle.
School Zone Signs	Signs which change the speed limit on road adjacent to schools on school days, signs which give advance warning of school and signs which warn of children crossing the road.
Seating Position	Location of occupant in, on, or outside of the motor vehicle prior to the impact of a crash.
Second Event	Occurrence which was the second thing that happened to the vehicle in question that was relevant to the crash.
Second Seat - Left Side	Passenger behind driver of motor vehicle or motorcycle.
Second Seat - Middle	Passenger in middle of back seat.
Second Seat - Right Side	Passenger behind right front seat passenger.

Separation of Units	When the truck or truck tractor becomes separated from the semi-trailer and/or trailer(s) they are pulling.
Sequence of Events	The events in sequence for this vehicle.
Severe Crosswinds	Winds at a high rate of speed blowing across the road.
Severe/Vehicle Totaled	Determination as to whether or not vehicle damage was disabling so that vehicle was not drivable. As a result, vehicle had to be towed, or carried from crash scene, or assisted by an emergency vehicle.
Sex	The gender of person involved in a crash.
Shared-use Path or Trail	A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right of way or wthin an independent right of way. Shared use paths will also be used by pedestrians, skaters, wheelchairs, joggers and other non-motorized users.
Shipping Papers (Truck)	The documents carried in the cab of the truck or truck tractor that indicates the cargo being carried and other motor carrier responsible for the movement of the cargo.
Shoulder	That part of a trafficway contiguous with the roadway for emergency use, for accommodation of stopped road vehicles, and for lateral support of the roadway structure.
Shoulder and Lap Belt Used	In a two part occupant restraint system, both the shoulder belt and lap belt portions are connected to a buckle.
Shoulder Belt Only Used	In a two part occupant restraint system, only the shoulder belt portion is connected to a buckle.
Shoulders Low, Soft, or High	A shoulder with a different height than that of the roadway.
Side-Road	A frontage road which distributes local traffic between interchanges for a limited access highway.
Side-Road Number of Lanes	Number of “thru” lanes on the side-road approaches at intersection including all lanes with “thru” movement (“thru” and left-turn, or “thru” and right-turn) but not exclusive turn lanes.

Sideswipe, Same Direction - Force of Collision	A crash in which the direction of force comes from the side and the vehicle is pointed in the same direction as the direction of force.
Sideswipe, Same Direction - Manner of Impact	A crash where two vehicles traveling the same direction and impact on the side.
Sideswipe, Opposite Direction - Force of Collision	A crash in which the direction of force comes from the side and the vehicle is pointed in the opposite direction from the force.
Sideswipe, Opposite Direction - Manner of Impact	A crash where two vehicles traveling the opposite direction and impact on the side.
Sidewalk	The portion of a highway, other than the roadway, set apart by curbs, barriers, markings or other delineation for exclusive use by pedestrians.
Single-Unit Truck (3-or-more axles)	A power unit that includes a permanently mounted cargo body (also called a straight truck) that has three or more axles.
Single-Unit Truck (2-axle, 6-tire)	A power unit that includes a permanently mounted cargo body (also called a straight truck) that has only two axles and at least six tires on the ground.
Skater	A person wearing in-line roller, roller or bladed skates or using a skateboard.
Sleeper Section of Cab (Truck)	Section in back of truck cab where occupants can sleep.
Sleet	Frozen or partly frozen rain.
Slope	The change in the elevation of an element of the roadway per unit of horizontal length, may be expressed as a percent or a ratio.
Slush	Partly melted or watery snow.
Snow	White crystals of frozen water formed directly from the water vapor of the air at a temperature of less than 32 F.
Source of Information	Identity of the source providing the information on the crash report.
Standing	Non-motorist not in movement on the roadway.
State Specific Identifier	A identifier which uniquely identifies a given crash in a given year and in a state.

Stop Signs	A six-sided red sign with “STOP” on it, requiring vehicles to come to a full stop and look for on-coming traffic before proceeding with caution.
Stopped in Traffic	Vehicle stopped in traffic at the time of the crash.
Striking	Vehicle hits an object, person or other vehicle at time of the crash.
Struck	Vehicle is hit by an object, person or other vehicle at time of the crash.
Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc.	Defensive driver action to defend against an apparent danger in, on, or due to the condition of the roadway or the presence of vehicle or object or non-motorist in the roadway in order to avoid a crash.
Switch in OFF Position	Air bag on-off switch is in the off position, indicating the air bag has been deactivated.
Switch in ON Position	Air bag on-off switch is in the on position, indicating air bag can be activated.
Switch Status	Determination of air bag on-off switch indicator as in the “on” or the “off” position.
T-Intersection	An intersection where two roadway connect and one roadway does not continue across the other roadway. The roadways form a “T”.
Termination Area	A termination area lets traffic resume normal driving at the end of a work zone area.
Test Given, Contaminated Sample/Unusable	Person administered test for drug/alcohol presence, but test sample invalidated.
Test Given, Results Unknown	Person administered test for drug/alcohol presence, but outcome of test not known.
Test Refused	Person refused to take drug/alcohol test.
Test Result	Outcome of test for drug presence indicating, if drugs present, which type is present.
Test Status	Indication as to whether drug test was administered; if the results show drugs reported; if test sample was unusable or contaminated. Indication as to whether alcohol test was administered; if test was refused; if results are known; if sample was contaminated or unusable.

Third Event	Occurrence which was the third thing that happened to the vehicle in question that was relevant to the crash.
Third Row - Left Side	Passenger seat on left side of third row of motor vehicle or second passenger (excluding driver) on motorcycle.
Third Row - Middle	Passenger seat in middle of third row of motor vehicle.
Third Row - Right Side	Passenger seat on right side of third row of motor vehicle.
Through Traveled Way	The portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.
Thru	
Total Fatalities	The count of fatalities (motorists and non-motorists) which resulted from injuries sustained as the result of a specific road vehicle crash. In reporting fatality statistics, a 30-day counting rule is generally used for highway safety statistics. These rules provide that only those deaths which occur within 30 days of a crash will be counted for statistical purposes.
Total Non-Fatal Injuries	The count of persons injured in a specific traffic crash.
Total Occupants In Vehicle	The count of occupants in the vehicle involved in the crash, including persons in or on the vehicle at the time of the crash.
Totally Ejected	Occupant's body completely thrown from the vehicle as a result of the crash.
Tractor/Semi-Trailer	A truck tractor that is pulling a semi-trailer.
Tractor/Triples	A truck tractor that is pulling a single semi-trailer and two full trailers.
Traffic Circle/Roundabout	An intersection of roads where vehicles must travel around a circle to continue on the same road or to any intersecting road.
Traffic Control Device Inoperative or Missing	A traffic control device which is not working or is not present.
Traffic Control Device Type	The type of traffic control (TCD) applicable to vehicle at crash location.

Traffic Control Signal	A device which controls traffic movements by illuminating systematically a green, yellow, or red light.
Trafficway	Any land way open to the public as a matter of right or custom for moving persons or property from one place to another.
Trafficway Description	An indication of whether or not a trafficway is divided and whether it serves one-way or two-way traffic. (A divided trafficway is one on which roadways for travel in opposite directions are physically separated by more than an easily traversable centerline.)
Trailer License Plate Number	The number or other characters, exactly as displayed, on the registration plate or tag affixed to the trailer.
Trailer Registration State and Year	The State, commonwealth, territory, foreign country, Indian nation, U.S. Government, etc. issuing the registration plate and the year of registration as indicated on the registration plate displayed on the trailer.
Trailing Unit	Occupant of motorcycle caboose or attached trailer of motor vehicle.
Transported to Medical Facility By	Type and identity of unit providing transport to medical facility receiving patient.
Trapped	Persons who are mechanically restrained in the vehicle by damaged vehicle components as a result of a crash, and are freed from the vehicle.
Traveled Way	The portion of a roadway for the movement of vehicles, exclusive of shoulders.
Trip Manifest (Bus)	The document carried by the driver in the bus that indicate the name of the motor carrier responsible for the movement of the passengers.
Truck Tractor (Bobtail)	A motor vehicle consisting of a single motorized transport device designed primarily for pulling semi-trailers.

Truck/Trailer	A motor vehicle combination consisting of a single-unit truck and a trailer (a vehicle designed for carrying property and so constructed that no part of its weight rests upon or is carried by the towing road vehicle).
Type of Junction	A junction is either an intersection or the connection between a driveway access and a roadway other than a driveway access.
Underride/Override	An underride refers to a vehicle sliding under another vehicle during a crash. An Override refers to a vehicle riding up over another vehicle. Both can occur with a parked vehicle.
US DOT	United States Department of Transportation.
Utility Pole	A pole or post constructed for the primary function of supporting an electric line, telephone line or other electrical-electronic transmission line or cable.
Utility Zone	See Work Zone.
Van/Enclosed Box	A single-unit truck, truck/trailer, or tractor/semi-trailer having an enclosed body integral to the frame of the vehicle.
Vehicle Authorized Speed Limit	Authorized speed limit for the vehicle at the time of the crash. The authorization may be indicated by the posted speed limit, blinking sign at construction zones, etc.
Vehicle Body Type	The general configuration or shape or a vehicle distinguished by characteristics such as number of doors, seats, windows, roof line, hard top or convertible.
Vehicle Configuration	Indicates the general configuration of vehicle.
Vehicle Identification Number	A unique combination of alphanumeric characters assigned to a specific vehicle and formulated by the manufacturer.
Vehicle License Plate Number	The number or other characters, exactly as displayed, on the registration plate or tag affixed to the vehicle. For combination trucks, vehicle plate number is obtained from the power unit or tractor.

Vehicle Make	The distinctive (coded) name applied to a group of vehicles by a manufacturer. This information also can be obtained separately from the Vehicle Registration File.
Vehicle Maneuver/Action	What the vehicle was doing prior to the crash.
Vehicle Model	The manufacturer assigned code denoting a family of vehicles (within a make) which has a degree of similarity in construction, such as body, chassis, etc. This information also can be obtained separately from the Vehicle Registration File.
Vehicle Model Year	The year which is assigned to a vehicle by the manufacturer. Usually it is the year in which the model change occurs. This information also can be obtained separately from the Vehicle Registration File.
Vehicle Registration State and Year	The State, commonwealth, territory, foreign country, Indian nation, U.S. Government, etc. issuing the registration plate and the year of registration as indicated on the registration plate displayed on the vehicle.
Vehicle Role	Indicates vehicle role in single and multi-vehicle crashes. Role does not imply fault.
Vehicle Unit Number	Number unique to the crash assigned to vehicle involved.
Vertical Alignment	The profile or elevation view of a roadway. Vertical alignment is described in terms of grades (uphill or downhill) and crest or sag curves.
Warning Signs	Signs used to warn traffic of existing or potentially hazardous conditions on or adjacent to a road.
Water (Standing, Moving)	Water in the road either standing still or moving which is there because of flooding.
Weather Condition	The prevailing atmospheric conditions that existed at the time of a crash.
Weight Rating of Power Unit of the Truck	A gross vehicle weight rating is a value specified by the manufacturer for a single-unit truck, truck tractor or trailer, or the sum of such values for the units which make up a truck combination.

Weight Rating of Power Unit	A gross vehicle weight rating is a value specified by the manufacturer of a motor vehicle.
Wet	Covered with or soaked with liquid (such as water).
Work Zone	A section of road marked to warn motorists that construction, maintenance, repair or utility work is being done. A work zone extends from the first warning sign to the end construction (work) sign or the last traffic control device (see Appendix J). Work zones may or may not involve workers or equipment on or near the road. A work zone may be stationary (such as repairing a water line) or moving (such as re-striping the centerline); it may be short term (such as pothole patching) or long term (such as building a new bridge).
Work Zone Related	A crash that occurs in or near a work zone or involves vehicles slowed or stopped because of the work zone even if the first harmful event was before the first warning sign.
Worn, Travel-Polished Surface	A road surface which is well used and shinny.
Y-Intersection	An intersection where three roadways connect and none of the roadways continue across the other roadways. The roadways form a “Y”.
Yield Signs	Three-sided signs which require vehicles to give way to other vehicles.

LIST OF APPENDICES

APPENDIX A: State and Province Codes

Source: Numeric state and province codes based on FIPS PUB 10-3. Alphabetic national codes from FIPS PUB 10-3. Alphabetic and numberic codes for the states and outlying areas of the United States from FIPS PUB 5-2 (ANSI X3, 38-R1994), except for Provinces of Quebec (abbreviated QC) and Saskatchewan (abbreivated SK) source for province information came from provinces.

United States (US)

AL	01	Alabama	MT	30	Montana
AK	02	Alaska	NE	31	Nebraska
AZ	04	Arizona	NV	32	Nevada
AR	05	Arkansas	NH	33	New Hampshire
CA	06	California	NJ	34	New Jersey
CO	08	Colorado	NM	35	New Mexico
CT	09	Connecticut	NY	36	New York
DE	10	Delaware	NC	37	North Carolina
DC	11	District of Columbia	ND	38	North Dakota
FL	12	Florida	OH	39	Ohio
GA	13	Georgia	OK	40	Oklahoma
HI	15	Hawaii	OR	41	Oregon
ID	16	Idaho	PA	42	Pennsylvania
IL	17	Illinois	RI	44	Rhode Island
IN	18	Indiana	SC	45	South Carolina
IA	19	Iowa	SD	46	South Dakota
KS	20	Kansas	TN	47	Tennessee
KY	21	Kentucky	TX	48	Texas
LA	22	Louisiana	UT	49	Utah
ME	23	Maine	VT	50	Vermont
MD	24	Maryland	VA	51	Virginia
MA	25	Massachusetts	WA	53	Washington
MI	26	Michigan	WV	54	West Virginia
MN	27	Minnesota	WI	55	Wisconsin
MS	28	Mississippi	WY	56	Wyoming
MO	29	Missouri	DS	57	The U.S. Department of State

AS	60	American Somoa
PZ	61	Panama Canal Zone
FM	64	Federated States of Micronesia
GU	66	Guam
MP	69	Northern Mariana Islands
PW	70	Palau
PR	72	Puerto Rico
UM	74	U.S. Minor Outlying Islands
MH	75	Marshall Islands
VI	78	Virgin Islands of the U.S.
WK	79	Wake Island

Canada (CN)

AB	01	Alberta	NS	07	Nova Scotia
BC	02	British Columbia	ON	08	Ontario
MB	03	Manitoba	PE	09	Prince Edward Island
NB	04	New Brunswick	QC	10	Quebec
NF	05	Newfoundland	SK	11	Saskatchewan
NT	06	Northwest Territory	YT	12	Yukon Territory

Mexico (MX)

AG	01	Aguascalientes	MR	17	Morelos
BA	02	Baja California Norte	NA	18	Nayarit
BJ	03	Baja California Sur	NL	19	Nuevo Leon
CM	04	Campeche	OA	20	Oaxaca
CI	05	Chiapas	PB	21	Puebla
CH	06	Chihuahua	QU	22	Queretero de Arteaga
CU	07	Coahuila de Zaragoza	QR	23	Quintana Roo
CL	08	Colima	SL	24	San Luis Potosi
DF	09	Distrito Federal	SI	25	Sinaloa
DO	10	Durango	SO	26	Sonora
GT	11	Guanajuato	TB	27	Tabasco
GR	12	Guerrero	TA	28	Tamaulipas
HL	13	Hidalgo	TL	29	Tlaxcala
JL	14	Jalisco	VC	30	Veracruz-Llava
MX	15	Mexico	YU	31	Yucatan
MC	16	Michoacan de Ocampo	ZA	32	Zacatecas

Other Jurisdictions (OT)

OT	99	Jurisdictions other than states or provinces of the United States, Canada, and Mexico (includes Indian Reservations)

Note: Code with country and state or province. Where there is no chance of ambiguity, state or province codes may be used without the country code. (Note that state and province codes are unique within each country but may be duplicated in other countries.)

EXAMPLE: Alabama may be coded as USAL or US01. Chihuahua may be coded as MXCH or MX06.

APPENDIX B: Dates and Times

Numbers are always right-justified. Use leading zeroes when necessary.

Subfield 1: Year

nnnn	Year
7777	Permanent
8888	Indefinite
9999	Unknown

Subfield 2: Month

01	January
02	February
03	March
04	April
05	May
06	June
07	July
08	August
09	September
10	October
11	November
12	December
77	Permanent
88	Indefinite
99	Unknown

Subfield 3: Day

nn	Day of Month
77	Permanent
88	Indefinite
99	Unknown

EXAMPLES: The fifth of March, nineteen ninety-two is coded 19920305.

Time

Subfield 1: Hour

nn	0-23, representing the time on a 24-hour clock
99	Unknown

Subfield 2: Minute

nn	Minute
99	Unknown

EXAMPLES: 11:55 p.m. would be coded 2355. Midnight is coded 0000 and is the beginning of a new day, not the end of the preceding day.

Appendix C: Names

The length and type of a name field is 35/ANS.

NAMES OF PERSONS

There are four subfields within the name field and each ends in a spacer (“@”) except for the final field. SUFFIX. Spacers must be used to differentiate the name subfields. From left to right, the code is composed of LAST NAME, @, FIRST NAME, @ MIDDLE NAMES SEPARATED BY SPACES, @, SUFFIX. A spacer must follow every subfield except for SUFFIX, even when the subfields contain no data.

Irregular Names

If a person has only one name, that name must be coded in tne Last Name subfield. An asterisk (***) in the First Name subfield indicates the person has no first name. If the person's first name is unknown, put no data into the First Name subfield except for the spacer.

This Middle Name subfield will accommodate multiple middle names. Multiple middle names should be separated by blank spaces.

The only special character allowed in the Last Name subfield is a hyphen (“-”), which may occur only once and must be embedded between two alphabetic characters (as in the last name "Stuart-Washington”).

Prefixes and titles are not allowed in any subfield of the name, and only the defined suffix codes may be used.

Long Names

If a coded name exceeds 35 characters, it may by truncated by the following rules:

1. If the coded name exceeds 35 characters, including spacers (@), the suffix subfield will not be coded.

2. If, after (1), the name code still exceeds 35 characters, the middle name is truncated. Truncation begins at the end of the last occurring middle name. If necessary, the middle name subfield may be reduced to the first initial of the first-occurring middle name. *The first initial of the first occurring middle name shall always be coded.*

3. If, after (1) and (2), the name code still exceeds 35 characters, the first name is truncated. Truncation begins at the last character of the first name. If necessary, the first name subfield may be reduced to the first initial of the first name. *The first initial of the first name shall always be coded.*

4 . If, after (1), (2), and (3), the name code still exceeds 35 characters, the last name is truncated. Truncation proceeds with the last character of the last name and continues until the name code is 35 characters in length, including spacers and first and middle initials.

CODE	Description
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	LAST NAME, @, FIRST NAME, @MIDDLE NAMES SEPARATED BY SPACES, @, SUFFIX

Suffixes (if present)

JR	Junior
SR	Senior
1ST (or I)	First
2ND (or II)	Second
3RD (or III)	Third
4TH (or IV)	Fourth
5TH (or V)	Fifth

EXAMPLE., DOE@JOHN@X is the proper code for '"John X. Doe." "John Wi nston Smith Doe, Jr. is coded DOE@JOHN@WINSTON SMITH@JR. '"Kimberly Allen Beauregard Churchill-Rockwell, IV" is coded CHURCHILL-ROCKWELL@KIMBERLY@ALLEN@ (the suffix is eliminated, and the second middle name is truncated).

OTHER NAMES

Names not belonging to persons, such as those of businesses, organizations, or state governments, are coded without the use of sub-fields, but use the following two rules:

1. When possible, use standard abbreviations, such as CO for "company", INC for 'Incorporated', or US for "United States."

2. If, after abbreviating, the name still exceeds 35 characters, truncate the end of the name as necessary.

EXAMPLES: The code for "John Smith Trade and Transportation Company" is JOHN SMITH TRADE & TRANSPORTATION C. DOE ELECTRONICS, INC Is the code for "Doe Electronics, Incorporated. "Wilson & Co." remains WILSON & CO.

Source:

Based on *Driver History Record Data Dictionary,* May 22, 1990, pages B5-B6.

Appendix D: Addresses

Address fields are variable length composite fields with a maximum length of 71 or 108. Following are descriptions of how to set up the fields for both. Each subfield contains one type of data followed by either a delimiter, "@", to indicate the end of the subfield or an ending delimiter, ";", to show the end of the address code. The spacers must be used to differentiate the name positions. The name and maximum length and type of each subfield is shown in the table below. The maximum length for each subfield includes one space for the delimiter.

SUBFIELD		MAXIMUM LENGTH/TYPE 71	108
Subfield 1	Street Address A (and delimiter)	21/ANS	36/ANS
Subfield 2	Street Address B (and delimiter)	21/ANS	36/ANS
Subfiold 3	City or Town (and delimiter)	16/ANS	21/ANS
Subfiold 4	Alphabetic State Code (and delimiter)	3/ANS	3/ANS
Subfield 6	Zip Code (and delimiter)	10/ANS	12/ANS

The code is composed in the basic format:

Street Address A@Street Address B@City or Town@State@Zip Code;

If data for any of the five subfields is omitted, that subfield's delimiter must still be coded.

Use standard abbreviations for street and place names if necessary. Abbreviations for use in addresses are listed in *National Five-Digit Zip Code & Post Office Directory* U.S. Postal Service, 1991, pages 2-3 through 2-11.

Use the two-character alphabetic codes for the state subfield. Alphabetic abbreviations of state names are available in Appendix A.

EXAMPLE. For 29293 Abbot Farms Court, Suite #40, Trenton, New Jersey, 08610 the code is:

29293 ABBOT FARMS CT@SUITE 40@TRENTON@NJ@08610;

For 1234 South Elm Avenue, Springfield, Illinois 62703, the code is:

1234 S ELM AVENUE@@SPRINGFIELD@IL@62703;

Note the two delimiters following Street Address A in the second example, which indicate that there is no Street Address B.

Source: Based on *Driver History Record Date Dictionary,* October 1994.

Federal Information Processing Standards (FIPS) Codes for Locations

Standardized codes for states, counties, cities/towns are published by the National Bureau of Standards in the Federal Information Processing Standards (FIPS) Register.

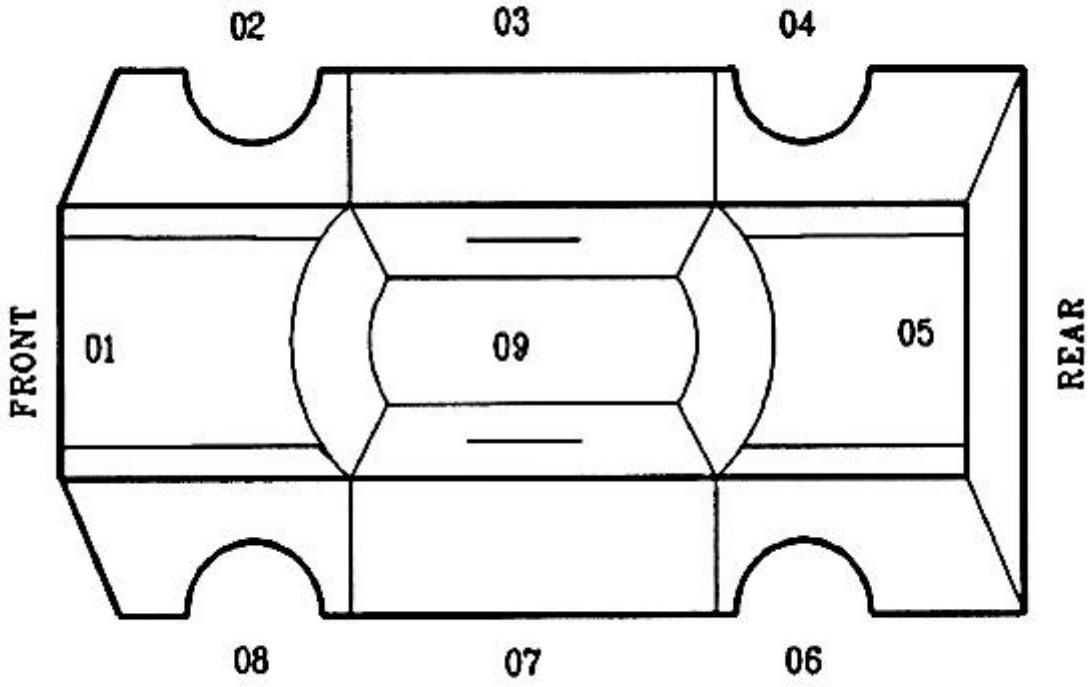
FIPS Publication 5-2 (May 1987
Codes for States, District of Columbia, and outlying areas

FIPS Publication 6-4 (August 31, 1990)
Codes for Counties, County Equivalents of the States of United States, District of Columbia

FIPS Publication 8-6 (March, 1995)
Codes for MSAs, CMSAs, PMASs, and NeCMAs

Appendix E: Vehicle Damage Areas

Source: ANSI D-20



DAMAGE AREA

00 None
01 Center front
02 Right front
03 Right side
04 Right rear
05 Rear center
06 Left rear
07 Left side
08 Left front
09 Top and windows
10 Undercarriage
11 Total (All areas)
12 Other
99 Unknown

Appendix F: Violation and Conviction Codes

(Source: D20.1)

Accident (AC):

AC Accident condition not covered by the codes defined below
AC1 Violation of a motor vehicle law resulting in bodily injury, (if fatality use FA)
AC2 Violation of motor vehicle law resulting in property damage
AC3 Violation of motor vehicle law not resulting in damage to persons or property but considered an accident
AC4 Involvement in an accident--no indication of fault

Detective Equipment (DE):

DE Defective equipment condition not covered by the codes defined below
DEI Operating with defective headlights
DE2 *Operating* with *defective brakes*
DE3 Operating with defective muffler or exhaust system
DE4 Operating with defective tires
DE5 Operating with any defective equipment resulting in inability to control vehicle movement properly

Driving While Intoxicated Violation Pertaining to Intoxicants (DI):

Di Driving while intoxicated condition not covered by the codes defined below
Dl1 Driving under the intoxicating influence of alcohol, narcotics, or pathogenic drugs
D12 *Driving while under the intoxicating influence of medication or* other substances not intended to produce intoxication as a result of normal use
D13 Refusal to submit to a test for alcohol after arrest for driving while intoxicated or suspicion of intoxication
D14 Illegal possession of alcohol or drugs in motor vehicle
D15 Administrative Per Se
D16 Impaired

Disability (DS):

DS Disability condition not covered by the codes defined below
DSI Inability to pass one or more tests required for driver license
DS2 Operating a motor vehicle improperly because of physical or mental disability
DS3 Failure to discontinue operating vehicle after onset of physical or mental disability (including uncontrollable drowsiness)

Equipment Misuse (EM):

EM Equipment Misuse condition not covered by the codes defined below
EMI Leaving a vehicle unattended with engine running
EM2 Overloading vehicle with passengers or cargo
EM3 Towing or pushing vehicle improperly
EM4 Creating unlawful noise with vehicle or accessory
EMS Failure to dim lights as required
EM6 Using a vehicle in connection with illegal activity other than a felony
EM7 Operating or using a vehicle without consent of the owner

Equipment Regulations (ER):

ER Equipment Regulations condition not covered by the codes defined below
ER1 Operating without equipment required by law
ER2 Use of equipment prohibited by law

Fatality (FA):

FA Fatality condition not covered by the codes defined below
FAl Violation of a motor vehicle law resulting in the death of another person
FA2 Violation of a motor vehicle law resulting in one's own death
FA3 Suicide by motor vehicle

Felony (FE):

FE Felony condition not covered by the codes defined below
FE1 Using a motor vehicle as the device for committing a felony
FE2 Using a motor vehicle in connection with a felony
FE3 Using a motor vehicle to aid and abet a felon

Following Improperly (FO):

FO Following Improperly condition not covered by the codes defined below
FOI Following too closely
F02 Failure of a truck to leave sufficient distance for being overtaken by another vehicle
F03 Following an emergency vehicle unlawfully

Financial Responsibility (FR):

FR Financial Responsibility condition not covered by the codes defined below
FR1 Unsatisfied judgement
FR2 Failure to meet requirements of the security following accident provisions of the FR law
FR3 Failure to file future proof of financial responsibility following conviction for violation of motor vehicle law
FR4 Failure to file future proof of financial responsibility as required under any other provision of the FR law
FRS Failure to maintain required compulsory liability insurance

Habitual Offender: *See HABITUAL VIOLATOR*

Hit and Run; Leaving the Scene; Evading Arrest (HR):

HR Hit and Run condition not covered by the codes defined below
HRI Failure to stop and render aid after involvement in accident resulting in bodily injury
HR2 Failure to stop and reveal identity after involvement in accident resulting in property damage only
HR3 Leaving the scene of an accident after providing aid or identity but before arrival of police
HR4 Evading arrest by fleeing the scene of citation or roadblock
HR5 Evading arrest by extinguishing lights (when lights required)

Habitual Violator (HV):

HV Conviction of multiple serious offenses resulting in a long term removal of the license. (Conviction of multiple minor offenses should use the appropriate Repeated Violations Codes)

Improper Lane Operating Where Prohibited (IL):

IL Improper Lane condition not covered by the codes defined below
IL1 Improper lane changing
IL2 Failure to keep in proper lane
IL3 Ran off road
IL4 Driving on road shoulder, in ditch or on sidewalk
IL5 Making improper entrance to or exit from trafficway

Littering (LI):

LI Littering condition not covered by the codes defined below
Lil Depositing injurious or harmful substance on trafficway
L12 Throwing from vehicle any burning or smoldering substance
L13 Littering from a motor vehicle

Misrepresentation Contribution Violation (MR):

MR Misrepresentation condition not covered by the codes defined below
MR1 Misrepresentation of identity or other facts to obtain a driver license (if registration or title involved, see RT)
MR2 Displaying a driver license which is invalid because alteration, counterfeiting, or withdrawal (suspension, revocation, etc)
MR3 Displaying the driver license of another person
MR4 Loaning a driver license
MRS Obtaining or applying for a duplicate driver license during withdrawal
MR6 Misrepresentation of identity or other facts to avoid arrest or prosecution

Miscellaneous (MS):

MS Miscellaneous condition not covered by the codes defined below
MS1 Starting improperly from a parked position
MS2 Improper backing
MS3 Opening vehicle closure into moving traffic or while vehicle is in motion
MS4 Crossing fire hose with vehicle
MS5 Sex offense in vehicle
MS6 Unsafe operation of vehicle

Passing (PA):

PA Passing condition not covered by the codes defined below
PAl Passing when prohibited by posted signs, pavement markings, or on hill or curve
PA2 Passing on wrong side
PA3 Passing with insufficient distance allowed for other vehicles or with inadequate visibility
PA4 Passing school bus taking on or discharging passengers or displaying warning not to pass
PA5 Failure to signal intention to pass
PA6 Failure to yield to overtaking vehicle

Reckless, careless, or negligent driving (RK):

RK Reckless, Careless, or Negligent Driving condition not covered by the codes defined below
RKI Heedless, willful, wanton, or reckless disregard of the rights and safety of others in operating a motor vehicle, endangering persons or property
RK2 Operating a motor vehicle without the exercise of care and caution required to avoid danger to persons or property
RK3 Transporting hazardous substance without required safety devices or precautions

RK4 Coasting or operating with gears disengaged

Required Reports, Appearances, or Documents (RR):

RR Required Reports, Appearances, or Documents condition not covered by the codes defined below
RRI Failure to file report of accident as required
RR2 Failure to appear for hearing or trial
RR3 Failure to surrender driver license, registration, or title documents as required
RR4 Failure to keep driver license or registration certificates in possession while driving or in vehicle as required
RR5 Operating motor vehicle with registration plates missing, defaced, or obscured

Registration and Titling (RT):

RT Registration and Titling condition not covered by the codes defined below
RTI Operating a vehicle without registering it as required
RT2 Operating with expired registration
RT3 Misrepresentation of identity or other facts to obtain a vehicle registration or title
RT4 Displaying a registration or title which is invalid because of alteration, counterfeiting or withdrawal (revocation, suspension, etc.)

Repeated Violations (RV):

RV Repeated Violations condition not covered by the codes defined below
RV1 Recurrence of violations requiring mandatory action of the licensing authority as specified by law
RV2 Accumulation of violations resulting in mandatory action of the licensing authority because of a statutory point system
RV3 Accumulation of violations resulting in discretionary action by the license authority

Right of Way (RW):

RW Right of Way condition not covered by the codes defined below
RWI Failure to yield right of way to emergency or other authorized vehicle
RW2 Failure to yield right of way at yield sign, after stop sign, or when emerging from private traffic way
RW3 Failure to yield right of way in a manner required at unsigned intersection
RW4 Failure to yield right of way to pedestrian, animal rider or animal-drawn vehicle as required
RW5 Failure to yield to school bus as required

Signs and Control Devices (SC):

SC Signs and Control Devices condition not covered by the codes defined below
SC1 Failure to follow instructions of police officer
SC2 Failure to obey traffic instructions stated on traffic sign or shown by traffic control device
SC3 Passing through or around barrier positioned to prohibit or channel traffic
SC4 Failure to observe warnings or instruction on vehicle properly displaying them
SC5 Failure to observe safety zone
SC6 Obscuring, tampering with, or illegally displaying traffic control devices, warnings, or instructions

Signaling Intention& (Si):

Si Signaling Intentions condition not covered by the codes defined below
Si1 Failure to signal intention to change vehicle direction or to reduce speed suddenly
S12 Giving wrong signal

S13 Failure to cancel directional signals after executing maneuver

Speeding (SP):

SP Speeding condition not covered by the codes defined below
SP1 Contest racing on public traffic way
SP2 Prima Facie speed violation or driving too fast for conditions
SP3 Speed in excess of posted maximum
SP4 Speed less than posted minimum
SP5 Operating at erratic or suddenly changing speeds

Turns (TU):

TU Turn condition not covered by the codes defined below
TUl Making right turn from left turn lane
TU2 Making left turn from right turn lane
TU3 Making improper turn

Violation of Restriction Licensing Requirements (VR):

VR Violation of Restriction Licensing Requirements condition not covered by the codes defined below
VRl Driving while revoked
VR2 Driving while suspended
VR3 Driving after license denied
VR4 Operating contrary to conditions specified on driver license
VR5 Operating without being licensed or without license required for type of vehicle operated
VR6 Allowing an unlicensed operator to drive

Wrong Way, Side or Direction (WW):

WW Wrong Way, Side or Direction condition not covered by the codes defined below
WWl Driving wrong way on one-way street
WW2 Driving or, wrong side of road
WW3 Driving in wrong direction at rotary intersection

Conviction Codes Relating To FHWA Final Rule; Serious Traffic Violations:

CIl 383.51 (b)(2)(i)(A) “Driving a commercial motor vehicle while the person's alcohol concentration is 0.04 percent or more,”
C12 383.51 (b)(2)(i)(B) “Driving under the influence of alcohol, as prescribed by State law;"
C13 383.51 lb)(2)(i)(C) "Refusal to undergo such testing as is required by any State or jurisdiction in the enforcement of Section 383.51 (b)i2)(1)(A)or(B), or Section 392.5(a)(2).”
C14 383.51 (b)(2)(ii) “Driving a commercial motor vehicle while under the influence of a controlled substance as defined under Section 102(8) of the Controlled Substances Act (21 U.S.C.802(6)), including all substances listed in Schedules I through V of 21 CFR Part 1308, as they may be amended from time to time.*
C15 383.51 (b)(2)(iii) “Leaving the scene of an accident involving a commercial motor vehicle;"
C16 383.51 (b)(2)(iv) “A felony involving the use of a commercial motor vehicle, other than a felony described in paragraph (b)(2)(v) of this section; or,"
C17 383,51 (b)(2)(v) “The use of a commercial vehicle in the commission at a felony involving manufacturing, distributing, or dispensing a controlled substance when defined as any

substance under Section 102(6) of the Controlled Substances Act (21 U.S.C. 802(6)) including all substances listed in Schedules I through V of 21 CFR Part 1308, as they may be amended from time to time.'

C18 383.5 (a) “Excessive speeding, involving any single offense for any speed of 1 5 miles per hour or more above the posted speed limit;”

C19 383.5 (b) “Driving a commercial motor vehicle in willful or wanton disregard for the safety of persons or property;-

C20 383.5 (b) “Reckless driving, as defined by State or local law or regulation.

C21 383.5 (c) “Improper or erratic traffic lane changes:"

C22 383.5 (d) “Following the vehicle ahead too closely.

C23 383.5 (a) “A violation, arising in connection with a fatal accident, of State or local law relating to motor vehicle traffic control (other than a parking violation). (Serious traffic violations exclude vehicle weight and defect violations.)”

Disqualification Period: One Year

C51 Disqualification for Driving a commercial motor vehicle while the person's alcohol concentration is 0.04 percent or more. 383.5 (b)(2)(i)(A)

C52 Disqualification for Driving under the influence of alcohol, as prescribed by State law. Section 383.51 (b)(2)(i)(B).

C53 Disqualification for Refusal to undergo such testing as is required by any State or jurisdiction in the enforcement of sections 383.51(b)(2)(i)(A) or (B) or 392.5(a)(2). Section 383.51 (b)(2)(i)(C).

C54 Disqualification for Driving a Commercial motor vehicle while under the influence of a controlled substance as defined under Section 102(6) of the Controlled Substance Act (21 U.S.C. 802(6)), including all substances listed in Schedules 1 through V of 21 CFR Part 1308, as they may be amended from time to time. Section 383.51 (b)(2)(ii).

C55 Disqualification for Leaving the scene of an accident involving a commercial motor vehicle. Section 383.51 (b)(2)(iii).

C56 Disqualification for A felony involving the use of a commercial motor vehicle, other than a felony described in paragraph (b)(2)(v) of Section 383.5 1. Section 383.51 (b)(2)(iv).

Disqualification Period Three Years

C61 As in C51, but involving hazardous materials. Section 383.511b)(2)(i)(A).

C62 As in C52, but involving hazardous materials. Section 383.51 (b)(2)(i)(B).

C63 As in C53, but involving hazardous materials. Section 383.51(b)(2)(i)(C).

C64 As in C54, but involving hazardous materials. Section 383.51 (b)(2)(ii).

C65 As in C55, but involving hazardous materials. Section 383.51 (b)(2)(iii).

C66 As in C56, but involving hazardous materials. Section 383.51 (b)(2)(iv).

Disqualification Period: Lifetime

C70 Disqualification for The use of a commercial motor vehicle in the commission of a felony involving manufacturing, distributing, or dispensing a controlled substance when defined as any substance under Section 102(6) of the Controlled Substances Act (21 U.S.C. 802(6)) including all substances listed in Schedules I through V of 21 CFR Part 1308, as they may be amended from time to time. This is a lifetime disqualification.

C71 Disqualification for 2nd for any combination of violations in Section 383.51 (b)(2) through (iv). This is Lifetime disqualification. (Driver may subsequently be eligible for reinstatement of privileges after I 0 year period.)

Disqualification Period: 60 and 120 Days

C80 Disqualification of a driver who during any 3-year period, is convicted of two serious traffic violations in separate incidents. Disqualification period 60 days Section 383.51(3)(c)(i)

C81 Disqualification of a driver who during any 3-year period, is convicted of three serious traffic violations in separate incidents. Disqualification period 120 days. Section 383.51(3)(c)(ii).

C99 24 Hour Out of Service Order, Section 392.5.

OTHER CODES

Change State of Record Surrender (CS):

CS This code is provided for optional use by the “old” State of Record in the Change State of - Record Process to mark their State's internal files indicating that this driver has been issued a license by another State (the “new' State of Record). As far as the driver is concerned in a Change State of Record process, the driving privilege has not been withdrawn, but rather transferred. Therefore, it is incorrect for the "old' State of Record (or any State of Record) to transmit a Driver History Record with a “CS” as the Withdrawal Reason in a withdrawal entry. Please refer to the Change State of Record section in the CDLIS-St:ate Procedures document for more information.

Voluntary Surrender (VS):

VS The voluntary surrender of a license and the driving privilege (i,e. the driver does not intend to renew their license to drive that class of vehicle)

Sources:

AAMVA Violations Exchange Code.

Appendix G: Data Elements Useful for Linkage

Data elements that describe the location:

Linkage of crash to roadway inventory files: Location in the crash data must be defined to match that in the roadway data file for linkage to be successful. Various types of data elements currently used to define location in the roadway files are listed below.

- Road Name/Route Number/Route Signing:
- Mile Marker/Milepost/Milepoint: (The displacement in miles or kilometers from a zero or base point (state line, county line, or point where the route originates) to the nearest 0.1 mile (km) along the route.)
- At Intersection of Road Name/Route Number:
- Miles, Feet (N,S,E,W) of Road Name/Route Number:
- Latitude/Longitude:

As new technology, such as the geopositioning satellite systems, are incorporated the highway location should be recorded to the appropriate precision allowed by the system, such as the nearest meter. As State road inventory files are converted to geographic information system (GIS) relational databases, the use of GPS crash location data will allow linking to more complete descriptors of the crash scene.

Linkage of crash to health care records: Location of the crash scene is defined as an address (pick-up location) in the EMS data and national guidelines also recommend similar documentation in the emergency department (ED) data. However, EDs do not routinely collect this information currently and hospitals never document the geographic location of the injury event. In many instances, defining the location of the crash as a city or county may be sufficient.

- Address of the crash
- City/county

Data elements that identify persons:

Linkage of the crash to EMS, emergency department, hospital discharge, other health records or insurance records: Persons may be identified using a combination of direct and/or indirect identifiers.

- Direct identifiers include name, initials, social security number, or some other type of identifier that is unique for a person. This type of identifier is not usually available for linking crash to health data because of the need to protect patient confidentiality.
- Indirect identifiers include date of birth (or age when date of birth is not available), sex, injury type and severity, residence/zip code, admit date/hour, area of injury and others which are used in combinations to uniquely identify a person.

Linkage of the crash to the driver licensing or citation file: Drivers may be identified using a unique number for that driver.

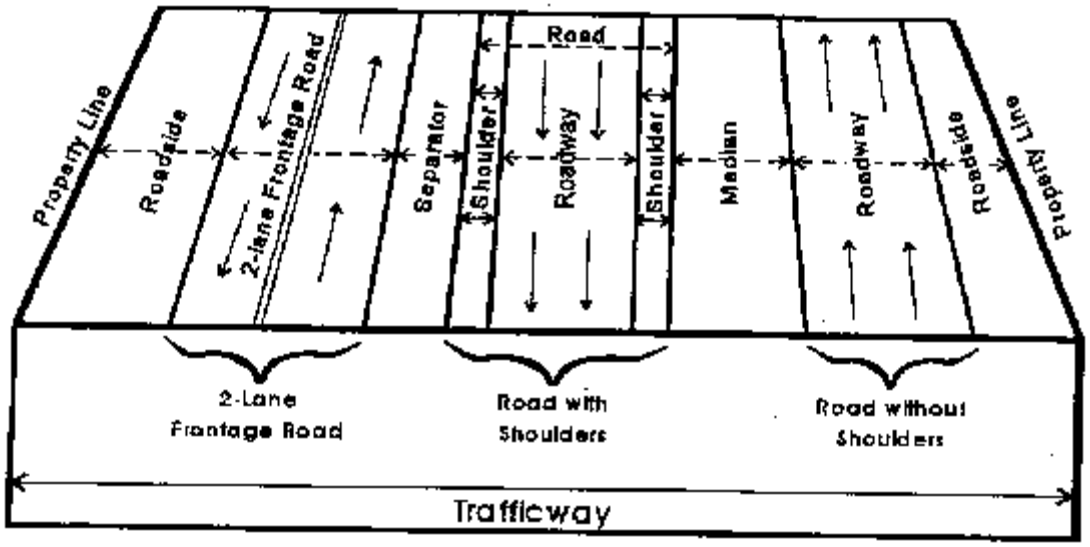
- Driver license number

Data elements that describe a specific event (crash):

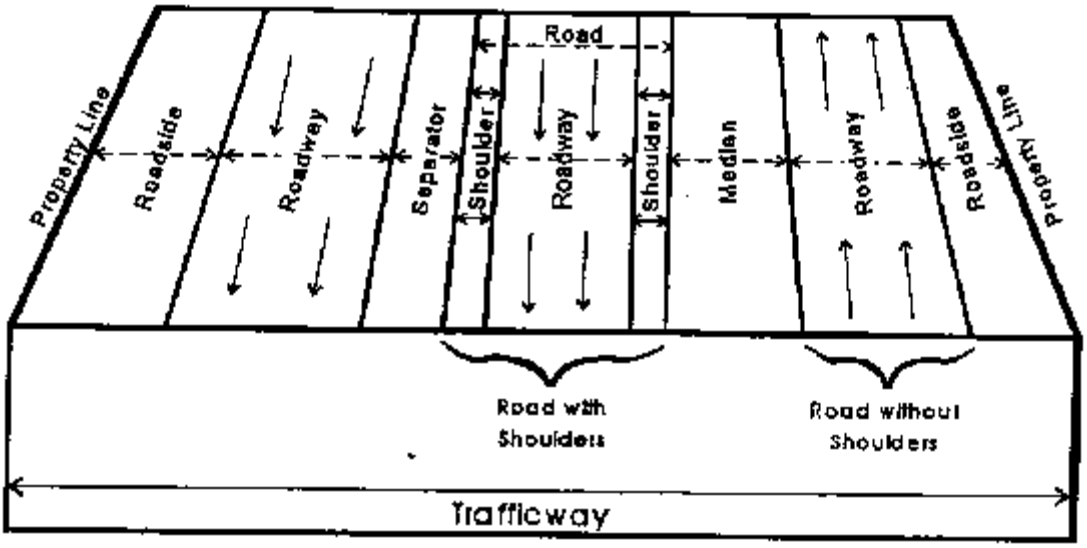
Linkage of the crash to the health records: Crash events may be identified by using a combination of data elements which document the date and time and who responded.

- Date and times for the crash, police and EMS response,
- Identification of the police and EMS emergency units that respond
- Identification of the hospital receiving the victim.
- Hospital service area/EMS region
- Type of event (crash)

Appendix H:Diagram of Trafficway

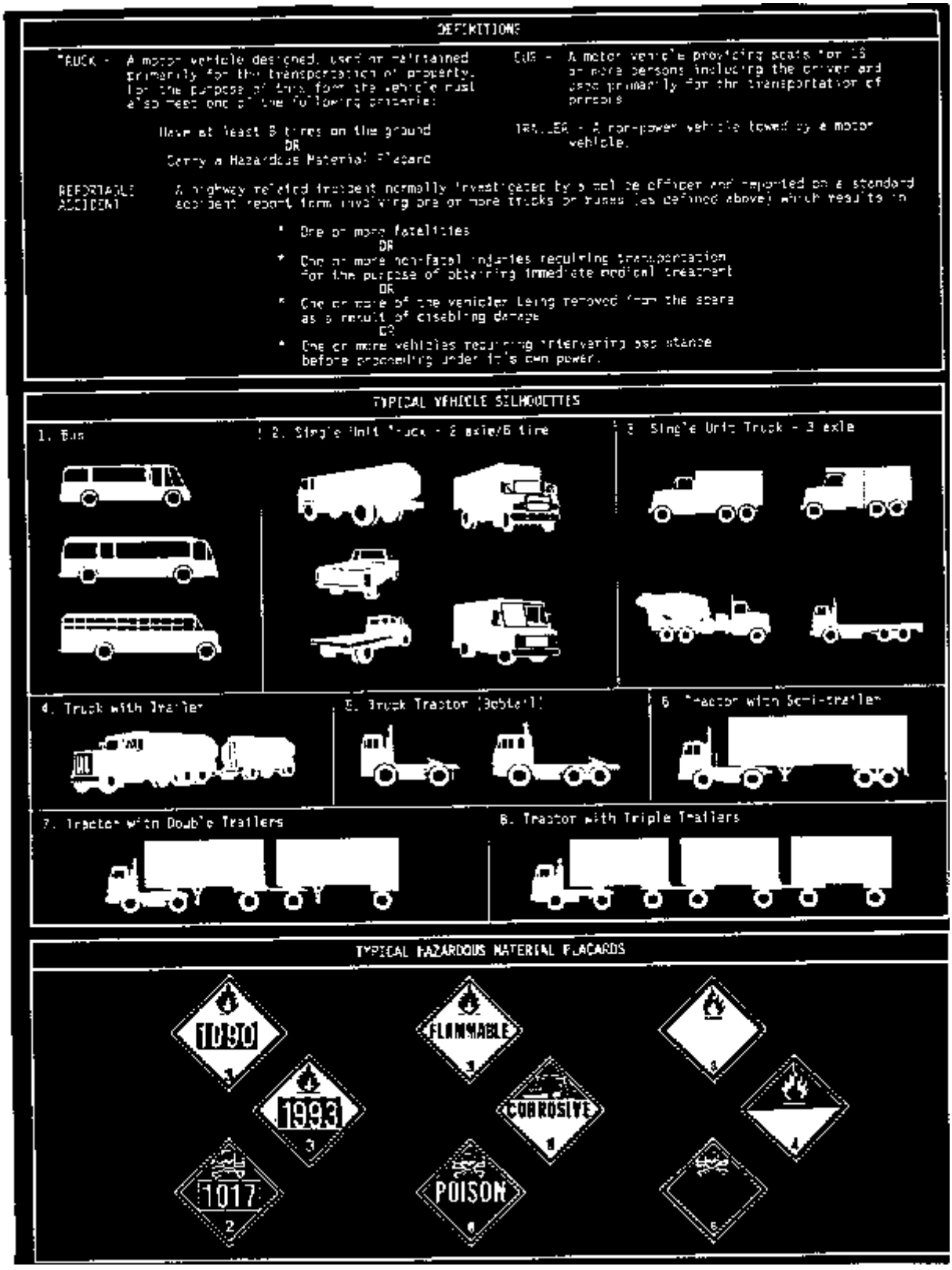


– Trafficway with Frontage Road

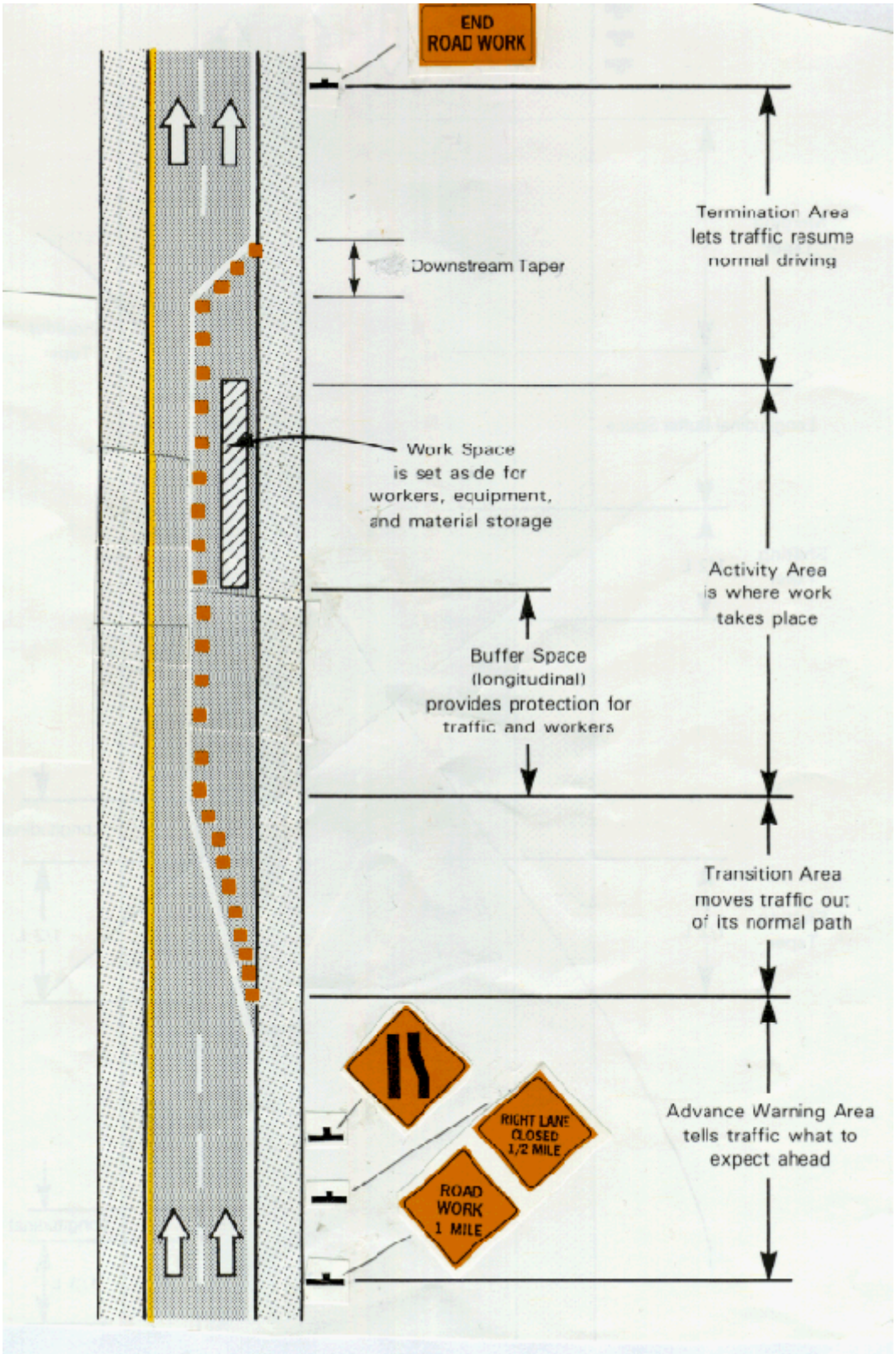


– Trafficway with Multiple Roadways in the Same Direction

Appendix I: Definitions for Truck Configurations and Placards



Appendix J: Diagram of Work Zone Area



DOT HS 808 745
August 1998