U.S. Department
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**National Highway
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# Crash Report Sampling System (CRSS) Analytical User's Manual, 2016-2017

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# New in 2017 CRSS

## Data Elements with Changes in Attributes

Below is a list of CRSS data elements that have substantial changes for 2017. Changes are denoted in bold/italics for additions and strikethrough for deletions. More detailed information on each data element can be found in the FARS/CRSS Coding and Validation Manual. NHTSA's National Center for Statistics and Analysis (NCSA) publishes these manuals for each year of data collection and they can be found at:

NCSA Publications- Manuals and Documentation

| DATA ELEMENT # | DATA ELEMENT NAME | SAS TABLE.NAME | COMMENTS |
|---|---|---|---|
| C18B | Areas of Impact (This Vehicle) | Cevent.AOI1, Vevent.AOI1, Vsoe.AOI | ▪ New Attribute: ***20 (Object Set in Motion, Unknown if Cargo/Vehicle Parts or Other)*** |
| C18D | Areas of Impact (Other Vehicle) | Cevent.AOI2, Vevent.AOI2 | ▪ New Attribute: ***20 (Object Set in Motion, Unknown if Cargo/Vehicle Parts or Other)*** |
| C19 | First Harmful Event | Accident.HARM_EV | ▪ New Attributes: ***91 (Unknown Object Not Fixed)***, ***93 (Unknown Fixed Object)*** |
| V10 | Vehicle Model | Vehicle.MODEL, Parkwork.PMODEL | ▪ New Attribute: ***707 (Electric Motorcycle)*** |
| V11 | Body Type | Vehicle.BODY_TYP, Parkwork.PBODYTYP | ▪ Discontinued Attributes: ~~30 Compact Pickup~~, ~~31 Standard Pickup~~<br>▪ New Attributes: ***34 (Light Pickup)***, ***84 (Motor Scooter)***, ***85 (Unenclosed Three Wheel Motorcycle / Unenclosed Autocycle [1 Rear Wheel])***, ***86 (Enclosed Three Wheel Motorcycle / Enclosed Autocycle [1 Rear Wheel])***, ***87 (Unknown Three Wheel Motorcycle Type)***, ***96 (Recreational Off-Highway Vehicle)***<br>▪ Revised Attributes: 80 (***Two Wheel*** Motorcycle ***[excluding motor scooters])***, 81 (Moped ***or*** ~~(~~motorized bicycle~~)~~), 82 (Three-wheel Motorcycle ~~or Moped – not All-Terrain Vehicle~~ ***[2 Rear Wheels]***), 83 (Off-road Motorcycle) ~~(2-wheel)~~, 88 (Other motored cycle type [mini-bikes, ~~motor scooters,~~ pocket motorcycles "pocket bikes"]) |

| DATA ELEMENT # | DATA ELEMENT NAME | SAS TABLE.NAME | COMMENTS |
|---|---|---|---|
| V29 | Areas of Impact-Initial Contact Point | Vehicle.IMPACT1, Parkwork.PIMPACT1 | ▪ New Attribute: ***20 (Object Set in Motion, Unknown if Cargo/Vehicle Parts or Other)*** |
| V32 | Sequence of Events | Cevent.SOE, Vevent.SOE, Vsoe.SOE | ▪ New Attributes: ***91 (Unknown Object Not Fixed)***, ***93 (Unknown Fixed Object)*** |
| V33 | Most Harmful Event | Vehicle.M_HARM, Parkwork.PM_HARM | ▪ New Attributes: ***91 (Unknown Object Not Fixed)***, ***93 (Unknown Fixed Object)*** |
| D23 | Condition (Impairment) at Time of Crash | Drimpair.DRIMPAIR | ▪ Revised Attribute: 04 (Paraplegic or ~~Restricted to~~ ***in a*** Wheelchair) |
| D24 | Related Factors-Driver Level | Vehicle.DR_SF1, Vehicle.DR_SF2, Vehicle.DR_SF3, Vehicle.DR_SF4 | ▪ New Attributes: ***55 (Improper Management of Vehicle Controls)***, ***56 (Object Interference with Vehicle Controls)***, ***57 (Driving with Tire-Related Problems)***, ***60 (Alcohol and/or Drug Test Refused)*** |
| PC5 | Trafficway Description | Vehicle.VTRAFWAY | ▪ Revised Attribute: 2 (Two-Way, Divided, Unprotected ~~(Painted >4 Feet)~~ Median) |
| P10 | Restraint System/Helmet Use | Person.REST_USE | ▪ Discontinued Attributes: ~~0 (Not Applicable)~~, ~~7 (None Used)~~<br>▪ New Attribute: ***20 (None Used / Not Applicable)*** |
| P12 | Air Bag Deployed | Person.AIR_BAG | ▪ Discontinued Attributes: ~~0 (Not Applicable)~~, ~~28 (Switched Off)~~ |
| P18A/ NM17A | Alcohol Test Status | Person.ALC_STATUS | ▪ Discontinued Attribute: ~~1 (Test Refused)~~ |
| P21A/ NM20A | Drug Test Status | Person.DSTATUS | ▪ Discontinued Attribute: ~~1 (Test Refused)~~ |
| P26/NM25 | Related Factors-Person Level | Person.P_SF1, Person.P_SF2, Person.P_SF3 | ▪ New Attribute: ***10 (Alcohol and/or Drug Test Refused)*** |
| NM13 | Non-Motorist Safety Equipment | Safetyeq.MSAFEQMT → Safetyeq.NMHELMET Safetyeq.NMPROPAD Safetyeq.NMOTHPRO Safetyeq.NMREFCLO Safetyeq.NMLIGHT Safetyeq.NMOTHPRE | ▪ Change to structure of element and attributes |
| NM14 | Condition (Impairment) at Time of Crash | Nmimpair.NMIMPAIR | ▪ Revised Attribute: 04 (Paraplegic or ~~Restricted to~~ ***in a*** Wheelchair) |

| DATA ELEMENT # | DATA ELEMENT NAME | SAS TABLE.NAME | COMMENTS |
|---|---|---|---|
| PB30 | Crash Type - Pedestrian | Pbtype.PEDCTYPE | ▪ Revised Attribute: 341 (Transit Bus ***Stop***-Related) |
| PB33 | Pedestrian Initial Direction of Travel | Pbtype.PEDDIR | ▪ Revised Attribute: 9 (***Not Derived/***Unknown Initial Direction of Travel) |
| PB37 | Pedestrian Scenario | Pbtype.PEDSNR | ▪ New Attributes: ***1d (Pedestrian Within Crosswalk Area, Other)***, ***2d (Pedestrian Outside Crosswalk Area, Other)***, ***3d (Pedestrian Within Crosswalk Area, Other)***, ***4d (Pedestrian Outside Crosswalk Area, Other)***, ***5d (Pedestrian Within Crosswalk Area, Other)***, ***6d (Pedestrian Outside Crosswalk Area, Other)***, ***7d (Pedestrian Within Crosswalk Area, Other)***, ***8d (Pedestrian Outside Crosswalk Area, Other)***, ***9d (Pedestrian Within Crosswalk Area, Other)***, ***10d (Pedestrian Outside Crosswalk Area, Other)***, ***11d (Pedestrian Within Crosswalk Area, Other)***, ***12d (Pedestrian Outside Crosswalk Area, Other)***, ***99 (Unknown/Insufficient Information)*** |
| PB38 | Crash Group – Pedestrian | Pbtype.PEDCGP | ▪ Revised Attribute: 340 (Bus ***Stop***-Related) |

## Summary of the SAS Naming Changes in 2017

| Locator Code | 2016 SAS Name | New 2017 SAS Name | Data Element Name |
|---|---|---|---|
| NM13 | Safetyeq.MSAFEQMT | Safetyeq.NMHELMET, Safetyeq.NMPROPAD, Safetyeq.NMOTHPRO, Safetyeq.NMREFCLO, Safetyeq.NMLIGHT, Safetyeq.NMOTHPRE | Non-Motorist Safety Equipment |
| -- | | None | |

The data elements in BLUE are changed in 2017 CRSS.
The data elements in RED are new to 2017 CRSS.

# Introduction

One of the primary objectives of the National Highway Traffic Safety Administration (NHTSA) is to reduce the human toll and property damage that motor vehicle traffic crashes inflict on our society. Crashes each year result in thousands of lives lost, hundreds of thousands of injured victims, and billions of dollars in property damage. Accurate data are required to support the development, implementation, and assessment of highway safety programs aimed at reducing this toll. NHTSA uses data from many sources, including the Crash Report Sampling System (CRSS). CRSS is a sample of police-reported crashes involving all types of motor vehicles, pedestrians, and cyclists, ranging from property-damage-only crashes to those that result in fatalities. CRSS is used to estimate the overall crash picture, identify highway safety problem areas, measure trends, drive consumer information initiatives, and form the basis for cost and benefit analyses of highway safety initiatives and regulations.

The CRSS obtains its data from a nationally representative probability sample selected from the more than seven million police-reported crashes which occur annually. Although various sources suggest that there are many more crashes that are not reported to the police, the majority of these unreported crashes involve only minor property damage and no significant personal injury. By restricting attention to police-reported crashes, the CRSS concentrates on those crashes of greatest concern to the highway safety community and the general public.

This multi-year analytical user's manual provides documentation on the evolution of coding practices of the CRSS. The manual will continue to grow each year and present the historical coding of the CRSS from inception through present. It includes documentation on the data elements that are contained in the CRSS and other useful information that will enable the users to become familiar with the data system. The FARS/CRSS Coding and Validation Manual provides more detailed definitions and coding rules for each data element and attribute. This manual is available at:

NCSA Publications- Manuals and Documentation.

The compilation of CRSS data is a priority for NHTSA. These data store valuable information that will be preserved over time and are available for present and future use. This analytical user's manual should help improve the usefulness and accessibility of the data. With the exception of personal notes, there is no reason to keep older versions of this reference manual. All information in earlier editions has been retained in this newer version.

# CRSS Sample Design

Beginning 2016, as part of the effort to modernize NHTSA's data collection system, NCSA designed two new national probability-based crash sampling systems – the Crash Report Sampling System (CRSS) – to replace the National Automotive Sampling System General Estimates System (NASS GES) and the Crash Investigation Sampling System (CISS) to replace the NASS Crashworthiness Data System (CDS). CRSS was designed completely independent of GES or CISS. CRSS has the same scope as GES: all police reported motor vehicle crashes that occur on a trafficway. The source of the information for CRSS continues solely to be the police crash report.

The CRSS police crash report sample is selected in multiple stages to produce a nationally representative probability sample since nationwide direct selection is infeasible. A brief description of the selection process at each of the three stages is given below.

**1st Stage- PSU Sample**: At the first stage, 3,117 counties in the country were grouped into 707 primary sampling units (PSU). US territories, some remote areas in Alaska, and small islands in Hawaii were excluded. A CRSS PSU is either a county or a group of counties. The 707 PSUs in the PSU frame were stratified into 50 strata by the four Census regions, urbanicity, vehicle miles traveled, total number of crashes, total truck miles traveled, and road miles. First, 101 PSUs were selected using a stratified probability proportional to size (PPS) sampling method. Then a sequence of sub-samples was selected from the original 101 PSU sample and strata were collapsed if necessary. This produced a sequence of nested PSU samples with different sample sizes selected from the collapsed strata. This sequence of nested PSU samples provides NHTSA flexibility to change and scale the PSU sample size in the future without reselecting the sample. Therefore, the final PSU sample was the result of a multiphase sampling mechanism in which the PSU selection probability is still approximately PPS. In the 2017 CRSS, 61 PSUs were selected from 25 PSU strata and 60 PSUs responded. (Note: In the 2016 CRSS, 60 PSUs were selected and 53 responded.)

**2nd Stage – PJ Sample**: The secondary sampling units (SSU) are police jurisdictions (PJs) or groups of police jurisdictions. Within each selected PSU, PJs were stratified into three strata by their measure of size (MOS) which is a combination of crash counts in six categories of interest. A Pareto sampling method was used to select PJ samples from each PJ strata. This method produces overlapping samples when the sample is reselected. This method reduces the potential of changes to the existing PJ sample when a new PJ sample has to be selected because of PJ frame changes. The PJ inclusion probability under Pareto sampling is approximately PPS. In the 2016 CRSS, a total of 350 SSUs were selected. In the 2017 CRSS, 397 SSUs were selected. Weight adjustments were made to mitigate the potential bias caused by the non-responding PJs.

**3rd Stage – Police Crash Report Sample**: The tertiary sampling units (TSU) are the police crash reports. The CRSS data collectors periodically obtain police crash reports from each selected PJ. During each collection, all new police crash reports accumulated since the last collection are sequentially stratified into nine police crash report strata (see table below). These nine strata were formed based on the results of NHTSA's internal and public data needs assessments. The stratification allows NHTSA to over-sample in Strata 2-6.

From each stratum, a systematic sampling method is used to select the police crash report sample. The sampling intervals are determined in such a way that the final weights are approximately equal for all the police crash reports in the same stratum with the ultimate aim of reducing the sampling variance for the domain estimates. The target annual sample size is approximately 50,000 PARs.

Please refer to the NHTSA Technical Report Crash Report Sampling System: Design Overview, Analytic Guidance, and FAQs for a more in-depth discussion of the CRSS sample design.

**CRSS Police Crash Report Domain Definition, Target Sample Allocation, and Population Distribution**

| Stratum | Description (Hierarchical Structure) | Target Percent of Sample | Estimated Percent of Population[1] |
|---|---|---|---|
| 2 | Crashes with killed or injured pedestrian | 9% | 2.3% |
| 3 | Crashes with killed or injured motorcycle rider | 6% | 1.4% |
| 4 | LMY passenger vehicle crashes with killed or incapacitated occupant | 4% | 0.4% |
| 5 | NLMY passenger vehicle crashes with killed or incapacitated occupant | 7% | 1.4% |
| 6 | LMY passenger vehicle crashes with injured occupant | 14% | 7.5% |
| 7 | Crashes involving medium or heavy truck or bus | 6% | 6.2% |
| 8 | NLMY passenger vehicle crashes with injured occupant | 12% | 15.0% |
| 9 | LMY passenger vehicle crashes AND no one is killed or injured | 22% | 28.8% |
| 10 | Crashes not in strata 2-9 | 20% | 37.1% |
| Late Model Year (LMY) passenger vehicle: ≤ 4 years old,<br>Non-Late Model Year (NLMY) passenger vehicle: ≥ 5 years old | | | |

[1] Estimated percent of population is based on 2016 CRSS estimates.

# CRSS Operations

The CRSS obtains its data from a nationally representative probability sample selected from the more than six million police-reported crashes that occur annually. To be eligible for the CRSS sample, a crash report must be completed by the police; it must involve at least one motor vehicle traveling on a trafficway; and the crash must result in property damage, injury, or death.

These crash reports are chosen from 60 selected sites across the United States that reflect the geography, population, miles driven, and crashes in the United States. CRSS data collectors review crash reports from hundreds of law enforcement agencies within the sites, systematically sampling tens of thousands of crash reports each year. The collectors obtain copies of the selected crash reports and send them to a central location for coding. No other data is collected beyond that in the selected crash reports.

Trained personnel interpret and code data directly from the crash reports into an electronic data file. Approximately 120 data elements are coded into a common format. After coding, quality checks are performed on the data to ensure validity and consistency. When these are completed, CRSS data files and coding documentation become publicly available.

The CRSS data are also used to respond to requests from the international and national highway safety communities, state and local governments, the Congress, federal agencies, research organizations, industry, the media, and the public.

# National Estimates

The CRSS police crash report sample is a complex multi-stage, stratified sample with unequal selection probabilities. Estimates from CRSS data must be properly weighted to ensure unbiased and robust estimates. The CRSS weights were created using the following steps:

1. Calculate base weights - the inverse of selection probabilities - at all three stages (PSU, PJ, and Police Crash Report) to correct the selection bias caused by the unequal selection probabilities.
2. Adjust the base weights for non-response at all three stages to correct potential non-response bias.
3. Adjust the weights for duplicate crashes that were identified post sampling.
4. Calibrate PJ and Police Crash Report weights using the PSU level total crash report stratum counts to further correct potential non-response bias and coverage bias.
5. Calibrate case weights by benchmarking Census resident population counts and FARS crash counts.

The final CRSS weight variable that incorporates the above steps is called WEIGHT in the CRSS analysis file. Please refer to the NHTSA Technical Report Crash Report Sampling System: Design Overview, Analytic Guidance, and FAQs for a more in-depth discussion on the CRSS weighting procedure.

Complex sample design features employed in CRSS data collection should be considered in analysis of the CRSS data. Treating the CRSS sample as a simple random sample in estimation may cause severe bias to both point estimates and standard error estimates. Specialized computer software for complex survey data analysis, such as SAS PROC SURVEY procedures and SUDAAN procedures, should be used for CRSS data analysis along with proper design statements. Because of the low PSU level sampling rates, the CRSS PSU sample can be treated as a with-replacement sample with unequal selection probabilities. This simplifies the variance estimation.

In the CRSS analysis file, the variable PSUSTRAT defines the PSU strata, and PSU_VAR identifies sampled PSUs for variance estimation. Also, certainty PSU is treated as a stratum in PSUSTRAT. The PJs selected in the certainty PSU are treated as PSUs in PSU_VAR.

Because of the limited PSU sample size, CRSS data is mainly for national or major domain estimates. For other smaller analysis domains, the point estimates may have large standard errors and the variance estimates may be biased.

Please refer to the NHTSA Technical Report Crash Report Sampling System: Design Overview, Analytic Guidance, and FAQs for more detailed information on CRSS estimation and examples.

# CRSS Imputation

CRSS data are obtained either directly from an item on the police crash report or by interpreting the information provided in the crash report through a review of the crash diagrams, the police officer's written summary of the crash, or combinations of data elements on the report. During this process of data acquisition, some records of the data elements are found missing or entered as 'unknown' or 'not reported' resulting in incomplete data for analysis. To offer more complete CRSS data for analysis, NHTSA imputes selected data elements from the Accident, Vehicle, and Person files as follows:

- ***Accident file***: Alcohol Involved in Crash, Atmospheric Conditions, Crash Date (Day of Week), Crash time (Hour), Crash Time (Minute), First Harmful Event, Light Condition, Manner of Collision, Maximum Injury Severity in Craash, Number of Injured in Crash, Relation to Junction Within Interchange Area, Relation to Junction - Specific Location;
- ***Vehicle file***: Areas of Impact- Initial Contact Point, Body Type, Driver Drinking in Vehicle, Hit and Run, Number of Injured in Vehicle, Maximum Injury Severity in Vehicle, Most Harmful Event, Vehicle Model Year, Movement Prior to Critical Event;
- ***Person file***: Age, Alcohol Test Status, Ejection, Injury Severity, Seating Position, Sex.

The above data elements are consistent with the ones imputed in the corresponding three files of NASS GES data from 2010 to 2015. More details about GES data imputation in 2015 and earlier years are available in the 1988-2015 NASS GES Analytical User's Manual.

The imputation process for CRSS data imputes a single value for each missing value. In other words, instead of filling in a missing value with a set of plausible values, a single estimated value is used to replace the missing value. The procedure is a multivariate imputation of each selected data element by means of its covariates. If this process produces inconsistent imputed values, a separate univariate imputation is conducted to impute the inconsistent imputed values. In the case of 'Body Type', however, imputation is done by univariate imputation only. In addition to the actual missing values, unknowns and not reported values are also imputed in the CRSS data.

The multivariate imputation is carried out by sequential regression modeling in which logistic regression models estimate missing values for the categorical data elements, and linear regression models for the continuous data elements. In each case, the stepwise regression algorithm automatically selects the covariates and computes the imputed (predicted) values of the data element. This process is done using the SAS callable software "IVEware" developed at the University of Michigan (http://www.isr.umich.edu/src/smp/ive/). This multivariate imputation procedure may produce imputed values inconsistent with other observed values or may terminate prematurely because of the number of iterations or other convergence criteria provisioned in the software. Then the univariate imputation procedure will be used to impute the inconsistent values or the remaining missing values. All data elements, except "Body Type", are first imputed by the multivariate regression method.

It should be noted that the data elements produced by the imputation do not replace the originals; all original data elements are kept intact in the CRSS data files. Rather, new imputed data elements are created from the original data elements having each unknown, not reported, or missing value substituted by the estimated value. The imputed data elements, identified by the suffix _IM (e.g. AGE_IM, WEATHER_IM for the data elements AGE and WEATHER, respectively) are added as additional data elements to their respective files. It is also worth noting that:

- the imputed maximum severity MAXSEV_IM and imputed number of injured NO_INJ_IM at the accident level are derived from INJSEV_IM which contains the imputed values of the Injury Severity at the person level;
- the imputed maximum severity MAXVSEV_IM and imputed number of injured NUM_INJV at the vehicle level are derived from INJSEV_IM which contains the imputed values of the Injury Severity at the person level;
- the imputed police reported alcohol involvement ALCHL_IM at the accident level is derived from PERALCH_IM which contains the imputed values of alcohol involvement at the person level;
- the imputed police reported alcohol involvement V_ALCH_IM at the vehicle level is derived from PERALCH_IM which contains the imputed values of alcohol involvement at the person level.

Overall, the CRSS imputation process employs IVEware software and several other programs written in SAS. Some text files input to this software provide additional controls to accurately and efficiently obtain the best estimates of the missing values. In addition, the process makes provision for edit- and consistency-checks on the data to avoid any implausible value that might have been predicted by the applicable regression models.

The table below shows the SAS names and the corresponding SAS labels of the selected data elements for both the original and imputed versions for the Accident, Vehicle, and Person files.

**Data Elements and Their Imputed Counterparts - SAS Names and Labels**

| SAS Data File | Data Element | | Imputed Data Element | |
|---|---|---|---|---|
| | SAS Name | SAS Label | SAS Name | SAS Label |
| ***Accident*** | | | | |
| Accident | ALCOHOL | Alcohol Involved | ALCHL_IM | Imputed Drinking in Crash |
| Accident | DAY_WEEK | Crash Date (Day of Week) | WKDY_IM | Imputed Day of the Week |
| Accident | HARM_EV | First Harmful Event | EVENT1_IM | Imputed First Harmful Event |
| Accident | HOUR | Crash Time (Hour) | HOUR_IM | Imputed Hour |
| Accident | LGT_COND | Light Condition | LGTCON_IM | Imputed Light Condition |
| Accident | MINUTE | Crash Time (Minute) | MINUTE_IM | Imputed Minute |
| Accident | MAN_COLL | Manner of Collision | MANCOL_IM | Imputed Manner of Collision |
| Accident | MAX_SEV | Maximum Injury Severity | MAXSEV_IM | Imputed Maximum Injury Severity |
| Accident | NUM_INJ | Number of Injured | NO_INJ_IM | Imputed Number Injured in Crash |
| Accident | RELJCT1 | Relation to Junction – Within Interchange Area | RELJCT1_IM | Imputed Relation to Junction – Within Interchange Area |
| Accident | RELJCT2 | Relation to Junction – Junction | RELJCT2_IM | Imputed Relation to Junction – Junction |
| Accident | WEATHER | Atmospheric Condition | WEATHR_IM | Imputed Weather Condition |

**Data Elements and Their Imputed Counterparts - SAS Names and Labels**
***(continued)***

| SAS Data File | Data Element | | Imputed Data Element | |
|---|---|---|---|---|
| | SAS Name | SAS Label | SAS Name | SAS Label |
| ***Vehicle*** | | | | |
| Vehicle | IMPACT1 | Area of Impact – Initial | IMPACT1_IM | Imputed Area of Impact-Initial |
| Vehicle | BODY_TYP | Body Type | BDYTYP_IM | Imputed Body Type |
| Vehicle | VEH_ALCH | Driver Drinking in Vehicle | V_ALCH_IM | Imputed Driver Drinking in Vehicle |
| Vehicle | HIT_RUN | Hit and Run | HITRUN_IM | Imputed Hit and Run |
| Vehicle | MAX_VSEV | Max Injury Severity | MXVSEV_IM | Imputed Maximum Injury in Vehicle |
| Vehicle | MOD_YEAR | Model Year | MDLYR_IM | Imputed Model Year |
| Vehicle | P_CRASH1 | Pre-Event Movement | PCRASH1_IM | Imputed Pre-Event Movement |
| Vehicle | M_HARM | Most Harmful Event | VEVENT_IM | Imputed Most Harmful Event |
| Vehicle | NUM_INJV | Number Injured in Vehicle | NUMINJ_IM | Imputed Number Injured in Vehicle |
| ***Person*** | | | | |
| Person | AGE | Age | AGE_IM | Imputed Age |
| Person | EJECTION | Ejection | EJECT_IM | Imputed Ejection |
| Person | INJ_SEV | Injury Severity | INJSEV_IM | Imputed Injury Severity |
| Person | DRINKING | Police-Reported Alcohol Involvement | PERALCH_IM | Imputed Police Rep. Alcohol Inv. |
| Person | SEAT_POS | Seating Position | SEAT_IM | Imputed Seating Position |
| Person | SEX | Sex | SEX_IM | Imputed Sex |

The following table shows percentages of 'Missing' values for the selected data elements for the Accident, Vehicle, and Person files in CRSS 2017 data.

**Data Elements and Percentages of Missing Values**

| SAS Data File | Data Element | | Missing Percentage |
|---|---|---|---|
| | SAS Name | SAS Label | |
| ***Accident*** | | | |
| Accident | ALCOHOL | Alcohol Involved | 14.4% |
| Accident | DAY_WEEK | Crash Date (Day of Week) | 0.0% |
| Accident | HARM_EV | First Harmful Event | 0.1% |
| Accident | HOUR | Crash Time (Hour) | 0.3% |
| Accident | LGT_COND | Light Condition | 0.8% |
| Accident | MINUTE | Crash Time (Minute) | 0.3% |
| Accident | MAN_COLL | Manner of Collision | 0.5% |
| Accident | MAX_SEV | Maximum Injury Severity | 1.8% |
| Accident | NUM_INJ | Number of Injured | 1.8% |
| Accident | RELJCT1 | Relation to Junction – Within Interchange Area | 21.4% |
| Accident | RELJCT2 | Relation to Junction – Junction | 2.1% |
| Accident | WEATHER | Atmospheric Condition | 4.5% |
| ***Vehicle*** | | | |
| Vehicle | IMPACT1 | Area of Impact - Initial | 2.5% |
| Vehicle | BODY_TYP | Body Type | 2.8% |
| Vehicle | VEH_ALCH | Driver Drinking in Vehicle | 9.4% |
| Vehicle | HIT_RUN | Hit and Run | 0.0% |
| Vehicle | MAX_VSEV | Max Injury Severity | 4.2% |
| Vehicle | MOD_YEAR | Model Year | 3.8% |

**Data Elements and Percentages of Missing Values**
***(continued)***

| SAS Data File | Data Element | | Missing Percentage |
|---|---|---|---|
| | SAS Name | SAS Label | |
| Vehicle | P_CRASH1 | Pre-Event Movement | 2.1% |
| Vehicle | M_HARM | Most Harmful Event | 0.0% |
| Vehicle | NUM_INJV | Number Injured in Vehicle | 4.2% |
| ***Person*** | | | |
| Person | AGE | Age | 6.9% |
| Person | EJECTION | Ejection | 6.4% |
| Person | INJ_SEV | Injury Severity | 3.5% |
| Person | DRINKING | Police-Reported Alcohol Involvement | 29.8% |
| Person | SEAT_POS | Seating Position | 1.7% |
| Person | SEX | Sex | 4.2% |

# CRSS SAS Data Files

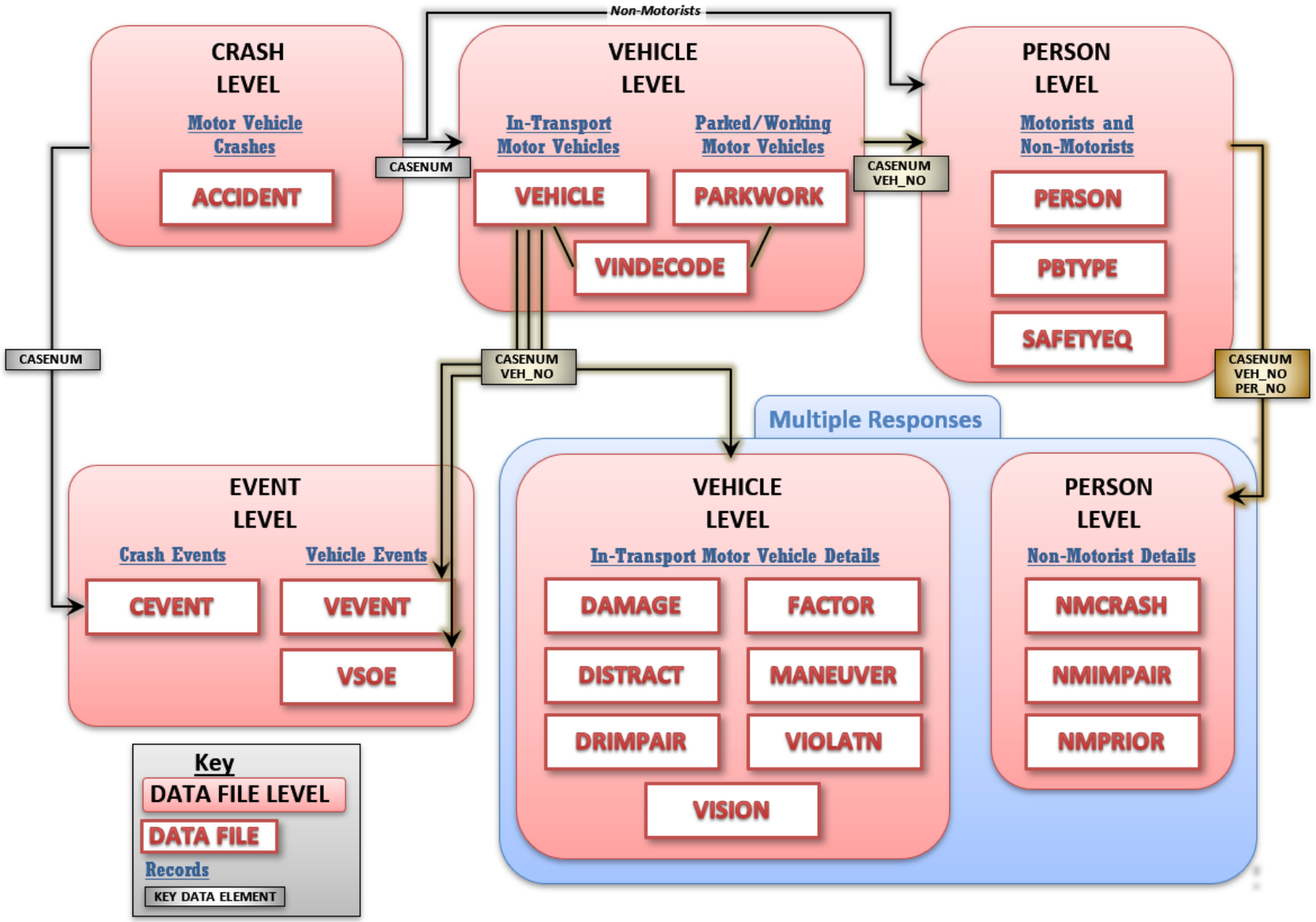
CRSS data are made available to the public in Statistical Analysis System (SAS) data files as well as comma-separated values (CSV) files. For the current data collection year, there are 20 data files. The current data files are: Accident, Vehicle, Person, Parkwork, Pbtype, Cevent, Vevent, Vsoe, Damage, Distract, Drimpair, Factor, Maneuver, Violatn, Vision, Nmcrash, Nmimpair, Nmprior, Safetyeq and Vindecode data files. Ten of these data files contain one data element each: MDAREAS, MDRSDTRD, MIMPAIR, MFACTOR, MDRMANAV, MVIOLATN, MVISOBSC, MTM_CRSH, NMIMPAIR, and MPR_ACT. For these data elements, the coder could code multiple responses (i.e., "select all that apply"); thus, there is a record for each response.

The data files are presented with their data elements in the Data Elements Definitions and Codes section. For each of the data elements, a brief definition is provided along with any additional information which could assist analyses. SAS names and values are also provided for the data elements.

The SAS data files are:

- ***Accident***: This data file contains information about crash characteristics and environmental conditions at the time of the crash. There is one record per crash.
- ***Vehicle***: This data file contains information describing the in-transport motor vehicles and the drivers of in-transport motor vehicles who are involved in the crash: There is one record per in-transport motor vehicle. Parked and working vehicle information is in the Parkwork data file.
- ***Person***: This data file contains information describing all persons involved in the crash including motorists (i.e., drivers and passengers of in-transport motor vehicles) and non-motorists (e.g., pedestrians and pedalcyclists). It provides information such as age, sex, vehicle occupant restraint use, and injury severity. There is one record per person.
- ***Parkwork***: This data file contains information about parked and working vehicles which were involved in CRSS crashes. A parked vehicle is a motor vehicle which is stopped off the roadway, i.e., parked off the roadway. A working vehicle is a motor vehicle involved in trafficway maintenance, construction, or utility activities. It excludes vehicles performing private maintenance, construction, or utility activities. Data users are strongly advised to consult the annual FARS/CRSS Coding and Validation Manuals for a detailed discussion. There is one record per parked/working vehicle.
- ***Pbtype****:* This data set contains information about crashes between motor vehicles and pedestrians, people on personal conveyances and bicyclists. Data from the crash are enter into the Pedestrian and Bicycle Crash Analysis Tool (PBCAT). The output fields from PBCAT, including the pre-crash actions of the parties involved (crash type), are included in this data set. There is one record for each pedestrian, bicyclist or person on a personal conveyance.
- ***Cevent***: This data file contains information for all of the qualifying events (both harmful and non-harmful) which occurred in the crash. This data file details the chronological sequence of events resulting from an unstabilized situation that constitutes a motor vehicle traffic crash. There is one record per event. Included in each record is a description of the event or object contacted (e.g., ran off road-right, crossed center line, guardrail, parked motor vehicle), the vehicles involved, and the vehicles' area of impact.

- ***Vevent***: This data file contains the sequence of events for each in-transport motor vehicle involved in the crash. This data file has the same data elements as the Cevent data file. In addition, this data file has a data element that records the sequential event number for each vehicle (VEVENTNUM). There is one record for each event for each in-transport motor vehicle.
- ***Vsoe***: This data file contains the sequence of events for each in-transport motor vehicle involved in the crash. This data file has a subset of the data elements contained in the Vevent data file (It is a simplified Vevent data file). There is one record for each event for each in-transport motor vehicle.
- ***Damage****:* This data set contains information about all of the areas on this vehicle that were damaged in the crash. There is one record per damaged area.
- ***Distract***: This data file contains information about driver distractions. There is at least one record per in-transport motor vehicle. Each distraction is a separate record.
- ***Drimpair***: This data file contains information about physical impairments of drivers of motor vehicles. There is one record per impairment and there is at least one record for each driver of an in-transport motor vehicle.
- ***Factor***: This data file contains information about vehicle circumstances which may have contributed to the crash. There is at least one record per in-transport motor vehicle. Each factor is a separate record.
- ***Maneuver***: This data file contains information about actions taken by the driver to avoid something or someone in the road. There is at least one record per in-transport motor vehicle. Each maneuver is a separate record.
- ***Violatn***: This data file contains information about violations which were charged to drivers. There is at least one record per in-transport motor vehicle. Each violation is a separate record.
- ***Vision***: This data file contains information about circumstances which may have obscured the driver's vision. There is at least one record per in-transport motor vehicle. Each obstruction is a separate record.
- ***Nmcrash***: This data file contains information about contributing circumstances or any improper actions of people who are not occupants of motor vehicles (e.g., pedestrians and bicyclists) noted on the police report. There is one record per action and there is at least one record for each person who is not an occupant of a motor vehicle.
- ***Nmimpair***: This data file contains information about physical impairments of people who are not occupants of motor vehicles. There is one record per impairment and there is at least one record for each person who is not an occupant of a motor vehicle.
- ***Nmprior***: This data file contains information about the actions of people who are not occupants of motor vehicles (e.g., pedestrians and bicyclists) at the time of their involvement in the crash. There is one record per action and there is at least one record for each person who is not an occupant of a motor vehicle.
- ***Safetyeq****:* This data file contains information about safety equipment used by people who are not occupants of motor vehicles. There is one record for each person who is not an occupant of a motor vehicle.
- ***Vindecode*****:** This data file contains vehicle descriptors for all vehicles, mainly passenger vehicles, trucks and motorcycles, based on the vehicle's VIN which is decoded using the VINtelligence program. There is one record per vehicle.


Non-Motorists
CRASH LEVEL
Motor Vehicle Crashes
ACCIDENT
CASENUM
VEHICLE LEVEL
In-Transport Motor Vehicles
Parked/Working Motor Vehicles
VEHICLE
PARKWORK
VINDECODE
CASENUM VEH_NO
PERSON LEVEL
Motorists and Non-Motorists
PERSON
PBTYPE
SAFETYEQ
CASENUM VEH_NO PER_NO
CASENUM
CASENUM VEH_NO
Multiple Responses
EVENT LEVEL
Crash Events
Vehicle Events
CEVENT
VEVENT
VSOE
VEHICLE LEVEL
In-Transport Motor Vehicle Details
DAMAGE
FACTOR
DISTRACT
MANEUVER
DRIMPAIR
VIOLATN
VISION
PERSON LEVEL
Non-Motorist Details
NMCRASH
NMIMPAIR
NMPRIOR
Key
DATA FILE LEVEL
DATA FILE
Records
KEY DATA ELEMENT

# CRSS Data Element List

The following lists all SAS data elements with their SAS data file locations.

## DATA ELEMENT LIST

# Data Element Definitions and Codes

This section represents the majority of the manual. It provides detailed information on the data elements, including definitions, SAS names, attribute codes and attribute labels. The FARS/CRSS Coding and Validation Manual contains a detailed description of each data element including coding instructions and attribute definitions. The Coding Manual is published for each year of data collection and is available at:

NCSA Publications - Manuals & Documentation - Crash Report Sampling System (CRSS).

The data elements are listed under the data file in which they are stored. Some data elements are provided in more than one data file to facilitate analyses. For example, Month of Crash (MONTH) is a crash-level data element but for convenience it is also provided in the Vehicle, Parkwork and Person files. For such elements, they are listed under the primary data file only.

All data elements are numeric except the following which are character:

- V13 Vehicle Identification Number (VIN, PVIN) *[12]*
- D6 Driver's Zip Code (DR_ZIP) *[5]*
- V16 & V16B Motor Carrier ID (MCARR_ID) *[11]*, (MCARR_I2) *[9]*
- V21C/HM3 Hazardous Material Identification Number (HAZ_ID) *[4]*
- V200-V280 VIN decoded data elements in the Vindecode data file *[255]*
- NM9-PB37 Pedestrian Scenario (PEDSNR) *[10]*

## Key Data Elements

All of the data files contain the following nine (9) crash-level data elements:

### Case Number

**Definition:** This data element is the unique case number assigned to each crash. It appears on each data file and is used to merge information from the data files together.

**Additional Information:** This data element is assigned by the data entry system to each crash and is the unique identifier for the crash within the year. It is used as the key, when any two of these files from the same year are merged.

**SAS Name: CASENUM**

**Attribute Codes**

***2016-Later***

xx Case Number

## Primary Sampling Unit (PSU)

**Definition:** This data element identifies the general geographic location from where the police report was sampled. A PSU is either a large central city, a county surrounding a city, or a group of counties.

**Additional Information:** See the section CRSS Sample Design for more information.

**SAS Name:** **PSU**

**Attribute Codes**

***2016-Later***

10-83 CRSS Primary Sampling Unit Number

## Primary Sampling Unit for Variance Estimation

**Definition:** This data element provides the PSU identifier to be used for variance estimation.

**Additional Information:** See Appendix E: Rules for Derived Data Elements for an explanation of this data element and how it is derived.

**SAS Name:** **PSU_VAR**

**Attribute Codes**

***2016-Later***

10 to 206

## Primary Sampling Unit Stratum

**Definition:** The PSUs are grouped into strata to reflect the first stage of the sample selection. This data element is used by statistical software packages that use complex sample design for calculating variances, such as SUDAAN and SAS V9.

**Additional Information:**

**SAS Name:** **PSUSTRAT**

**Attribute Codes**

***2016-Later***

1 to 25

## Region of the Country

**Definition:** This data element identifies the region of the country where the crash occurred.

**Additional Information:** This data element is derived based on the state in which the Primary Sampling Unit is located where the crash occurred.

See Appendix E: Rules for Derived Data Elements for an explanation of this data element and how it is derived.

**SAS Name: REGION**

**Attribute Codes**

***2016-Later***

1 Northeast *(PA, NJ, NY, NH, VT, RI, MA, ME, CT)*
2 Midwest *(OH, IN, IL, MI, WI, MN, ND, SD, NE, IA, MO, KS)*
3 South *(MD, DE, DC, WV, VA, KY, TN, NC, SC, GA, FL, AL, MS, LA, AR, OK, TX)*
4 West *(MT, ID, WA, OR, CA, NV, NM, AZ, UT, CO, WY, AK, HI)*

## Urbanicity

**Definition:** This data element describes whether the geographical area of the crash is essentially urban or rural. The area is considered urban if it has a population of 250,000 or greater, otherwise it is rural.

**Additional Information:** See Appendix E: Rules for Derived Data Elements for an explanation of this data element and how it is derived.

**SAS Name: URBANICITY**

**Attribute Codes**

***2016-Later***

1 Urban
2 Rural

## C34 Stratum

**Definition:** This data element identifies the number of the category in which the police report was originally listed in the PARSE Program.

**Additional Information:** See CRSS Sample Design for more information.

**SAS Name: STRATUM**

**Attribute Codes**

***2016-Later***

2 CRSS crashes involving at least one injured (A, B, C, or ISU) or Killed (K) person who was not in a motor vehicle (i.e., non-motorist).
*[Not a MV Occupant- Any Injury]*

3 CRSS crashes not qualifying for Stratum 2 involving at least one injured (A, B, C, or ISU) or Killed (K) occupant of a motorcycle or moped.
*[Motorcycle- Any Injury]*

4 CRSS crashes not qualifying for Strata 2 or 3 involving at least one occupant of a late model year (LMY) passenger vehicle who was injured with a Suspected Serious Injury (A) or Killed (K).
*[Late Model Year Passenger Vehicle- Serious Injury]*

5 CRSS crashes not qualifying for Strata 2, 3, or 4 involving at least one occupant of a non-late model year (NLMY) passenger vehicle who was injured with a Suspected Serious Injury (A) or Killed (K).
*[Non-Late Model Year Passenger Vehicle- Serious Injury]*

6 CRSS crashes not qualifying for Strata 2, 3, 4, or 5 involving at least one occupant of a late model year (LMY) passenger vehicle who was injured (B, C, or ISU).
*[Late Model Year Passenger Vehicle- Minor Injury]*

7 CRSS crashes not qualifying for Strata 2, 3, 4, 5, or 6 involving at least one medium or heavy truck or bus (includes school bus, transit bus, and motor coach) with GVWR equal to or greater than 10,001 pounds.
*[Medium/Heavy Truck or Bus]*

8 CRSS crashes not qualifying for Strata 2, 3, 4, 5, 6, or 7 involving at least one occupant of a non-late model year (NLMY) passenger vehicle who was injured (B, C, or ISU).
*[Non-Late Model Year Passenger Vehicle- Minor Injury]*

9 CRSS crashes not qualifying for Strata 2, 3, 4, 5, 6, 7, or 8 involving at least one late model year (LMY) passenger vehicle AND no one in the crash was injured (A, B, C, or ISU) or Killed (K).
*[Late Model Year Passenger Vehicle- No Injuries in Crash]*

10 CRSS crashes not qualifying for Strata 2, 3, 4, 5, 6, 7, 8, or 9.
*[Other]*

## C35 Police Jurisdiction (PJ)

**Definition:** This data element identifies the number of the police jurisdiction from which the police crash report was originally sampled.

**Additional Information:**

**SAS Name: PJ**

**Attribute Codes**

***2016-Later***

46-4060 CRSS Police Jurisdiction Number

## Case Weight

**Definition:** This data element is used to produce national estimates from the data.

**Additional Information:** See the section National Estimates for more information.

**SAS Name:** **WEIGHT**

All of the vehicle level data files contain the preceding accident level data elements as well as VEH_NO:

### V3/D3/PC3/P3/NM4 Vehicle Number

**Definition:** This data element is the consecutive number assigned to each vehicle in the case. This data element appears on each vehicle level data file and is used in conjunction with the CASENUM data element to merge information from vehicle level data files.

**Additional Information:** All vehicles (motor vehicles in-transport as well as parked/working vehicles) are sequentially ordered starting with 1.

**SAS Name:** **VEH_NO**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Non-Motorist |
| 1-999 | Assigned Vehicle Number |

All of the person level data files contain the preceding accident level and vehicle level data elements as well as PER_NO:

## P4/NM3 Person Number

**Definition:** This data element is the consecutive number assigned to each person in the case (i.e., each occupant, pedestrian, or non-motorists involved in the crash). This data element appears on each person level data file and is used in conjunction with the CASENUM data element (and sometimes the VEH_NO data element) to merge information from person level data files.

**Additional Information:** This data element is computer assigned. Each occupant of the vehicle is numbered and each non-occupant is numbered; in the case of a non-occupant the vehicle number is zero. The numbers for occupants are consecutive, for each vehicle, beginning with 1. Numbers are never skipped. Drivers do not have to be coded 1. Non-occupants are identified by vehicle number 0 and are numbered consecutively starting with 1 for each non-motorist. To get drivers see data element PER_TYP, under Person Type.

**SAS Name: PER_NO**

**Attribute Codes**

***2016-Later***

1-999 Assigned Person Number

The CEVENT and VEVENT data files contain the preceding crash level data elements as well as EVENTNUM:

### C18 Event Number

**Definition:** This data element is the consecutive number assigned to each harmful and non-harmful event in a crash, in chronological order.

**Additional Information:** Qualifying events are those which involve an in-transport motor vehicle or an object set in motion by an in-transport motor vehicle.

**SAS Name: EVENTNUM**

**Attribute Codes**

***2016-Later***

1-999 Event Number

The VEVENT and VSOE data files contain the preceding crash level data elements and VEH_NO as well as VEVENTNUM:

### C18 Vehicle Event Number

**Definition:** This data element is the consecutive number assigned to each harmful and non-harmful event for this vehicle, in chronological order.

**Additional Information:** The vehicle's event number shows the chronological sequence of the qualifying harmful and non-harmful events involving a particular vehicle. Qualifying events are those which involve an in-transport motor vehicle or an object set in motion by an in-transport motor vehicle.

**SAS Name: VEVENTNUM**

**Attribute Codes**

***2016-Later***

1-999 Vehicle Event Number

## The ACCIDENT Data File

The Accident data file includes crash data. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, and WEIGHT, which are described in beginning of the Data Element Definitions and Codes section. The Accident data file also contains the data elements on the following pages.

CASENUM is the unique case identifier for each record.

## C3 Number of Persons Not in Motor Vehicles

**Definition:** This data element is the number of Person Forms (Not a Motor Vehicle Occupant) that are applicable to this case (i.e., non-occupants).

**Additional Information:** This represents the number of forms created for persons *not* in motor vehicles. It is the number of persons in the crash where "Person Type" is in (4, 5, 6, 7, 8, 10 or 19).

Note: Persons where "Person Type" = 3 (Occupant of a Motor Vehicle Not In-Transport) are *not* included in this data element but are counted in C3A below.

**SAS Name: PEDS**

**Attribute Codes**

***2016-Later***

0-99 Number of Persons Not in Motor Vehicles

## C3A Number of Persons Not in Motor Vehicles in Transport (MVIT)

**Definition:** This data element is a count of the number of non-motorists in the crash. A non-motorist is defined as a pedestrian, a cyclist, an occupant of a motor vehicle not in-transport, a person riding a horse, an occupant of an animal drawn conveyance, person associated with non-motorist conveyance (e.g., baby carriage, skate board, wheelchair), or an other non-motorist (e.g., person outside a trafficway, person in a house).

**Additional Information:** This data element is calculated as the count of all persons in the crash where "Person Type" is in (3, 4, 5, 6, 7, 8, 10 or 19).

**SAS Name: PERNOTMVIT**

**Attribute Codes**

***2016-Later***

0-98 Number of Persons Not in Motor Vehicles in Transport

## C4 Number of Total Motor Vehicles

**Definition:** This data element is the number of contact motor vehicles that the officer reported on the police crash report as a unit involved in the crash.

**Additional Information:** This number represents all of the vehicles in the crash. This includes the vehicles in-transport which are documented in the Vehicle data file and the vehicles not in-transport which are documented in the Parkwork data file. This data element only appears in the Accident data file.

**SAS Name: VE_TOTAL**

**Attribute Codes**

***2016-Later***

1-999 Number of Vehicles in Crash

## C4A Number of Motor Vehicles in Transport (MVIT)

**Definition:** This data element is a count of the number of motor vehicles in-transport involved in the crash. Legally parked vehicles are not included.

**Additional Information:** This data element is derived as the count of all vehicles in the crash where "Unit Type" = 1. It is the number of records in the Vehicle data file.

This data element also appears in the Vehicle and Person data files, and in the Parkwork data file as PVE_FORMS.

**SAS Name: VE_FORMS**

**Attribute Codes**

***2016-Later***

1-999 Number of Vehicles

## C4B Number of Parked/Working Vehicles

**Definition:** This data element is a count of the number of parked and working vehicles involved in the crash.

**Additional Information:** This data element is derived as the count of all vehicles in the crash where "Unit Type" is in (2, 3 or 4). It is the number of records in the Parkwork data file.

Working vehicles include only vehicles involved in trafficway maintenance, construction, or utility activities. Vehicles performing private maintenance, construction, or utility activities are excluded.

**SAS Name: PVH_INVL**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0-999 | Number of Parked/Working Vehicles in the Crash |

## C5A Number of Persons in Motor Vehicles in Transport (MVIT)

**Definition:** This data element is a count of the number of motorists in the crash. A motorist is a driver, passenger or unknown occupant type of a motor vehicle in-transport.

**Additional Information:** This data element is derived as the count of all persons in the crash where "Person Type" is in (1, 2 or 9).

Note: Persons where "Person Type" = 3 (Occupant of a Motor Vehicle Not In-Transport) are *not* included in this data element.

**SAS Name: PERMVIT**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0-999 | Number of Persons in Motor Vehicles In-Transport |

## C8 Crash Date

## C8A Month of Crash

**Definition:** This data element records the month in which the crash occurred.

**Additional Information:** This data element also appears in the Vehicle and Person data files and in the Parkwork data file as PMONTH.

**SAS Name: MONTH**

**Attribute Codes**

***2016-Later***

1 January
2 February
3 March
4 April
5 May
6 June
7 July
8 August
9 September
10 October
11 November
12 December

## C8C Day of Week

**Definition:** This data element records the day of the week on which the crash occurred.

**Additional Information:** This data element is derived from the SAS Weekday function. The SAS Weekday function returns the day of the week from a date.

See Appendix D: Analytical Classification of Select CRSS Data Elements for the standard NCSA classifications for this data element.

**SAS Name:** **DAY_WEEK**

**Attribute Codes**

***2016-Later***

1 Sunday
2 Monday
3 Tuesday
4 Wednesday
5 Thursday
6 Friday
7 Saturday
9 Unknown

## C8CI Imputed Day of Week

**Definition:** This imputed data element has the same definition and data element values as Day of Week, excluding value 9 for unknown day of week.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **WKDY_IM**

## C8D Year of Crash

**Definition:** This data element records the year in which the crash occurred.

**Additional Information:**

**SAS Name:** **YEAR**

**Attribute Codes**

***2016-Later***

xxxx Year of the Crash

## C9 Crash Time

## C9A Hour of Crash

**Definition:** This data element records the hour at which the crash occurred.

**Additional Information:** Military time is used. Noon is coded as "12." Midnight is coded as HOUR=0 and MINUTE=0. Hour is coded 0 for one minute after midnight to fifty-nine minutes after midnight.

See Appendix D: Analytical Classification of Select CRSS Data Elements for the standard NCSA classifications for this data element.

This data element also appears in the Vehicle and Person data files and in the Parkwork data file as PHOUR.

**SAS Name: HOUR**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0-23 | Hour |
| 99 | Unknown |

## C9AI Imputed Hour of Crash

**Definition:** This imputed data element has the same definition and data element values as Hour of the Crash, excluding value 99 for unknown hour.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name: HOUR_IM**

## C9B Minute of Crash

**Definition:** This data element records the minutes after the hour at which the crash occurred.

**Additional Information:** This data element also appears in the Vehicle and Person data files and in the Parkwork data file as PMINUTE.

**SAS Name:** **MINUTE**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0-59 | Minute |
| 99 | Unknown |

## C9BI Imputed Minute of Crash

**Definition:** This imputed data element has the same definition and data element values as Minute of the Crash, excluding value 99 for unknown minutes.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **MINUTE_IM**

## C19 First Harmful Event

**Definition:** This data element describes the first injury or damage producing event of the crash.

**Additional Information:** "First Harmful Event" applies to the crash. "Most Harmful Event" (M_HARM) applies to the vehicle. "First Harmful Event," "Most Harmful Event," and the "Sequence of Events" data elements have the same harmful event attributes. "Sequence of Events" also has non-harmful event attributes.

This data element is derived from the "Sequence of Events" data element as the first value that is not between codes 60 and 71 (non-harmful events). See Appendix E: Rules for Derived Data Elements for an explanation of this data element and how it is derived.

This data element also appears in the Vehicle and Person data files and in the Parkwork data file as PHARM_EV.

**SAS Name: HARM_EV**

**Attribute Codes**

| ***2016*** | ***2017-Later*** | |
|---|---|---|
| *NONCOLLISION* | | |
| 1 | 1 | Rollover/Overturn |
| 2 | 2 | Fire/Explosion |
| 3 | 3 | Immersion or Partial Immersion |
| 4 | 4 | Gas Inhalation |
| 5 | 5 | Fell/Jumped from Vehicle |
| 6 | 6 | Injured in Vehicle *(Non-Collision)* |
| 7 | 7 | Other Noncollision |
| 16 | 16 | Thrown or Falling Object |
| 44 | 44 | Pavement Surface Irregularity *(Ruts, Potholes, Grates, etc.)* |
| 51 | 51 | Jackknife *(Harmful to This Vehicle)* |
| 72 | 72 | Cargo/Equipment Loss or Shift *(Harmful to This Vehicle)* |
| *COLLISION WITH MOTOR VEHICLE IN TRANSPORT* | | |
| 12 | 12 | Motor Vehicle In-Transport |
| 54 | 54 | Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport |
| 55 | 55 | Motor Vehicle in Motion Outside the Trafficway |
| *COLLISION WITH OBJECT NOT FIXED* | | |
| 8 | 8 | Pedestrian |
| 9 | 9 | Pedalcyclist |
| 10 | 10 | Railway Vehicle |
| 11 | 11 | Live Animal |
| 14 | 14 | Parked Motor Vehicle |
| 15 | 15 | Non-Motorist on Personal Conveyance |
| 18 | 18 | Other Object Not Fixed |
| 45 | 45 | Working Motor Vehicle |
| 49 | 49 | Ridden Animal or Animal Drawn Conveyance |
| 73 | 73 | Object That Had Fallen From Motor Vehicle In-Transport |
| 74 | 74 | Road Vehicle on Rails |
| -- | 91 | Unknown Object Not Fixed |

## C19 First Harmful Event *(continued)*

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| | *COLLISION WITH FIXED OBJECT* | |
| 17 | 17 | Boulder |
| 19 | 19 | Building |
| 20 | 20 | Impact Attenuator/Crash Cushion |
| 21 | 21 | Bridge Pier or Support |
| 23 | 23 | Bridge Rail *(Includes Parapet)* |
| 24 | 24 | Guardrail Face |
| 25 | 25 | Concrete Traffic Barrier |
| 26 | 26 | Other Traffic Barrier |
| 30 | 30 | Utility Pole/Light Support |
| 31 | 31 | Post, Pole or Other Support |
| 32 | 32 | Culvert |
| 33 | 33 | Curb |
| 34 | 34 | Ditch |
| 35 | 35 | Embankment |
| 38 | 38 | Fence |
| 39 | 39 | Wall |
| 40 | 40 | Fire Hydrant |
| 41 | 41 | Shrubbery |
| 42 | 42 | Tree *(Standing Only)* |
| 43 | 43 | Other Fixed Object |
| 46 | 46 | Traffic Signal Support |
| 48 | 48 | Snow Bank |
| 50 | 50 | Bridge Overhead Structure |
| 52 | 52 | Guardrail End |
| 53 | 53 | Mail Box |
| 57 | 57 | Cable Barrier |
| 58 | 58 | Ground |
| 59 | 59 | Traffic Sign Support |
| -- | 93 | Unknown Fixed Object |
| 99 | 99 | Unknown |

## C19I Imputed First Harmful Event

**Definition:** This imputed data element has the same definition as First Harmful Event, excluding value 99 for unknown first harmful event.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **EVENT1_IM**

## C20 Manner of Collision

**Definition:** This data element describes the orientation of two motor vehicles in-transport when they are involved in the "First Harmful Event" of a collision crash. If the "First Harmful Event" is not a collision between two motor vehicles in-transport it is classified as such.

**Additional Information:** This data element also appears in the Vehicle and Person data files and in the Parkwork data file as PMAN_COLL.

**SAS Name:** **MAN_COLL**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Not Collision with Motor Vehicle in Transport |
| 1 | Front-to-Rear |
| 2 | Front-to-Front |
| 6 | Angle |
| 7 | Sideswipe, Same Direction |
| 8 | Sideswipe, Opposite Direction |
| 9 | Rear-to-Side |
| 10 | Rear-to-Rear |
| 11 | Other |
| 98 | Not Reported |
| 99 | Unknown |

## C20I Imputed Manner of Collision

**Definition:** This imputed data element has the same definition and data element values as "Manner of Collision," excluding value 99 for unknown manner of collision and value 98 for not reported manner of collision.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **MANCOL_IM**

## C21 Relation to Junction

## C21A Relation to Junction- Within Interchange Area

**Definition:** This data element identifies the crash's location with respect to presence in an interchange area. The coding of this data element is done in two sub-fields (see also C21B) and is based on the location of the "First Harmful Event" of the crash.

**Additional Information:**

**SAS Name: RELJCT1**

**Attribute Codes**

***2016-Later***

0 No
1 Yes
8 Not Reported
9 Unknown

## C21AI Imputed Relation to Junction- Within Interchange Area

**Definition:** This imputed data element has the same definition and data element values as Relation to Junction – Within Interchange Area excluding value 8 for not reported and 9 for unknown.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name: RELJCT1_IM**

## C21B Relation to Junction- Specific Location

**Definition:** This data element identifies the crash's location with respect to presence in or proximity to components typically in junction or interchange areas. The coding of this data element is done in two sub-fields (see also C21A) and is based on the location of the "First Harmful Event" of the crash.

**Additional Information:**

**SAS Name:** **RELJCT2**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 1 | Non-Junction |
| 2 | Intersection |
| 3 | Intersection Related |
| 4 | Driveway Access |
| 5 | Entrance/Exit Ramp Related |
| 6 | Railway Grade Crossing |
| 7 | Crossover Related |
| 8 | Driveway Access Related |
| 16 | Shared-Use Path Crossing |
| 17 | Acceleration/Deceleration Lane |
| 18 | Through Roadway |
| 19 | Other Location Within Interchange Area |
| 20 | Entrance/Exit Ramp |
| 98 | Not Reported |
| 99 | Unknown |

See Appendix F: Analysis of Pedestrian and Bicycle Crashes Around Intersections for guidance on analyzing Pedestrian/Bicyclist crash locations.

## C21BI Imputed Relation to Junction- Specific Location

**Definition:** This imputed data element has the same definition and data element values as Relation to Junction – Specific Location, excluding value 98 for not reported and 99 for unknown.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **RELJCT2_IM**

## C22 Type of Intersection

**Definition:** This data element identifies and allows separation of various intersection types.

**Additional Information:**

**SAS Name: TYP_INT**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 1 | Not an Intersection |
| 2 | Four-Way Intersection |
| 3 | T-Intersection |
| 4 | Y-Intersection |
| 5 | Traffic Circle |
| 6 | Roundabout |
| 7 | Five-Point, or More |
| 10 | L-Intersection |
| 98 | Not Reported |
| 99 | Unknown |

## C23 Relation to Trafficway

**Definition:** This data element identifies the location of the crash as it relates to its position within or outside the trafficway based on the "First Harmful Event."

**Additional Information:**

**SAS Name: REL_ROAD**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 1 | On Roadway |
| 2 | On Shoulder |
| 3 | On Median |
| 4 | On Roadside |
| 5 | Outside Trafficway |
| 6 | Off Roadway – Location Unknown |
| 7 | In Parking Lane/Zone |
| 8 | Gore |
| 10 | Separator |
| 11 | Continuous Left Turn Lane |
| 98 | Not Reported |
| 99 | Unknown |

## C24 Work Zone

**Definition:** This data element identifies a motor vehicle traffic crash in which the first harmful event occurs within the boundaries of a work zone or on an approach to or exit from a work zone, resulting from an activity, behavior, or control related to the movement of the traffic units through the work zone.

**Additional Information:** This data element identifies a "Work Zone Accident" as defined in ANSI D16.1, 7th Edition. If the crash qualifies as a "Work Zone Accident" then the type of work activity is identified. Use of the codes does not imply that the crash was caused by the construction, maintenance, or work activity.

**SAS Name: WRK_ZONE**

**Attribute Codes**

***2016-Later***

0 None
1 Construction
2 Maintenance
3 Utility
4 Work Zone, Type Unknown

## C25 Light Condition

**Definition:** This data element records the type/level of light that existed at the time of the crash as indicated in the police crash report.

**Additional Information:**

**SAS Name:** **LGT_COND**

**Attribute Codes**

***2016-Later***

1 Daylight
2 Dark – Not Lighted
3 Dark – Lighted
4 Dawn
5 Dusk
6 Dark – Unknown Lighting
7 Other
8 Not Reported
9 Unknown

## C25I Imputed Light Condition

**Definition:** This imputed data element has the same definition and data element values as Light Condition, excluding value 9 for unknown light condition and value 8 for not reported light condition.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **LGTCON_IM**

## C26 Atmospheric Conditions

**Definition:** This data element records the prevailing atmospheric conditions that existed at the time of the crash as indicated in the police crash report.

**Additional Information:** This data element identifies up to two values. If more than two atmospheric conditions were reported, the two conditions that most affect visibility were selected. Accident.WEATHER1 and Accident.WEATHER2 are coded data elements, and Accident.WEATHER is derived from these two.

See Appendix E: Rules for Derived Data Elements for an expanded explanation of this data element and how it is derived.

**SAS Name:** **WEATHER , WEATHER1 , WEATHER2**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | No Additional Atmospheric Conditions |
| 1 | Clear |
| 2 | Rain |
| 3 | Sleet or Hail |
| 4 | Snow |
| 5 | Fog, Smog, Smoke |
| 6 | Severe Crosswinds |
| 7 | Blowing Sand, Soil, Dirt |
| 8 | Other |
| 10 | Cloudy |
| 11 | Blowing Snow |
| 12 | Freezing Rain or Drizzle |
| 98 | Not Reported |
| 99 | Unknown |

## C26I Imputed Atmospheric Conditions

**Definition:** This imputed data element has the same definition and data element values as Atmospheric Conditions, excluding value 99 for unknown atmospheric conditions and value 98 for not reported atmospheric conditions.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **WEATHR_IM**

## C27 School Bus Related

**Definition:** This data element identifies if a school bus, or motor vehicle functioning as a school bus, is related to the crash.

**Additional Information:** The number of school bus related crashes may not equal the number of crashes with school buses involved. For example, if a vehicle goes around a stopped school bus and hits a pedestrian, the school bus usually will not be coded, but the crash is school bus related.

**SAS Name:** **SCH_BUS**

**Attribute Codes**

***2016-Later***

0 No
1 Yes

## C32 Related Factors- Crash Level

**Definition:** This data element records factors related to the crash expressed by the investigating officer.

**Additional Information:** There are also vehicle-level-related factors in the Vehicle data file, VEH_SC1 and VEH_SC2 and driver-related factors, also in the Vehicle data file, namely DR_SF1, DR_SF2, DR_SF3, and DR_SF4. In addition there are person-related factors P_SF1, P_SF2, and P_SF3 in the Person data file.

The CRSS coder may have used any of the three data elements to code a related factor. One must test all three data elements to insure that the selected related factor is included.

**SAS Name: CF1, CF2, CF3**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | None |
| 3 | Other Maintenance or Construction-Created Condition |
| 5 | Surface Under Water |
| 7 | Surface Washed Out *(Caved in, Road Slippage)* |
| 13 | Aggressive Driving/Road Rage by Non-Contact Vehicle Driver |
| 14 | Motor Vehicle Struck By Falling Cargo or Something That Came Loose From or Something That Was Set in Motion By a Vehicle |
| 15 | Non-Occupant Struck By Falling Cargo, or Something Came Loose From or Something That Was Set In Motion By A Vehicle |
| 16 | Non-Occupant Struck Vehicle |
| 17 | Vehicle Set In Motion By Non-Driver |
| 19 | Recent Previous Crash Scene Nearby |
| 20 | Police-Pursuit-Involved |
| 21 | Within Designated School Zone |
| 23 | Indication of a Stalled/Disabled Vehicle |
| 24 | Unstabilized Situation Began and All Harmful Events Occurred Off of the Roadway |
| 25 | Toll Booth/Plaza Related |
| 26 | Backup Due to Prior Non-Recurring Incident |
| 27 | Backup Due to Prior Crash |
| 28 | Backup Due to Regular Congestion |
| 99 | Unknown |

## C33 Interstate Highway

**Definition:** This data element identifies whether the crash occurred on an interstate highway. Interstate highway is a Federal Highway Administration classification.

**Additional Information:**

**SAS Name: INT_HWY**

**Attribute Codes**

***2016-Later***

0 No
1 Yes
9 Unknown

## C90 Maximum Injury Severity in Crash

**Definition:** This data element records the single most severe injury of all persons involved in the crash, and is derived from "Injury Severity" in the Person data file.

**Additional Information:** The following order of severity is used.

- 4-Fatal
- 3-Suspected Serious Injury
- 2-Suspected Minor Injury
- 1-Possible Injury
- 5-Injured, Unknown Severity
- 0-No Apparent Injury
- 6-Died Prior
- 9- Unknown/Not Reported
- 8-No Person Involved in Crash

See Appendix E: Rules for Derived Data Elements for an expanded explanation of this data element and how it is derived.

**SAS Name: MAX_SEV**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | No Apparent Injury |
| 1 | Possible Injury |
| 2 | Suspected Minor Injury |
| 3 | Suspected Serious Injury |
| 4 | Fatal |
| 5 | Injured, Severity Unknown |
| 6 | Died Prior to Crash |
| 8 | No Person Involved in Crash |
| 9 | Unknown/Not Reported |

## C90I Imputed Maximum Injury Severity in Crash

**Definition:** This imputed data element has the same definition and data element values as Maximum Injury Severity in Crash, excluding value 9 for unknown maximum injury severity.

**Additional Information:** See the CRSS Imputation section of this manual.

This data element is derived from "Imputed Injury Severity" in the Person data file.

**SAS Name: MAXSEV_IM**

## C91 Number Known Injured in Crash

**Definition:** This data element records the number of persons injured in the crash and is derived by counting all persons with "Injury Severity" of (1, 2, 3, 4, or 5) in the crash. This count includes fatally injured occupants.

**Additional Information:** See Appendix E: Rules for Derived Data Elements for an expanded explanation of this data element and how it is derived.

**SAS Name:** NUM_INJ

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | No Person Injured/Property Damage Only Crash |
| x | Number of Known Injured |
| 98 | No Person Involved in the Crash |
| 99 | All Persons in Crash are Unknown If Injured. |

## C91I Imputed Number Known Injured in Crash

**Definition:** This imputed data element has the same definition and data element values as Number Known Injured in Crash, excluding value 99 for unknown number injured, which is imputed, and the attribute code 98, which is converted to code 0.

**Additional Information:** See the CRSS Imputation section of this manual.

This data element is derived from "Imputed Injury Severity" in the Person data file.

**SAS Name:** NO_INJ_IM

## C92 Alcohol Involved in Crash

**Definition:** This data element records alcohol use for drivers, pedestrians, cyclists and other types of non-motorists (except occupants of motor vehicles not in-transport) involved in the crash. The data element is derived from "Police-Reported Alcohol Involvement" in the Person data file.

**Additional Information:** 8 (No Applicable Person) is coded if the crash involved only passengers of in-transport motor vehicles, occupants of motor vehicles not in-transport or unknown occupant types who are in an in-transport motor vehicle where there is no driver present.

See Appendix E: Rules for Derived Data Elements for an expanded explanation of this data element and how it is derived.

**SAS Name: ALCOHOL**

**Attribute Codes**

***2016-Later***

1 Alcohol Involved
2 No Alcohol Involved
8 No Applicable Person
9 Unknown

## C92I Imputed Alcohol Involved in Crash

**Definition:** This data element has the same definition and data element values as Alcohol Involved in Crash, excluding value 9 for unknown alcohol involvement, which is imputed, and the value 8, which is converted to attribute code 2.

**Additional Information:** See the CRSS Imputation section of this manual.

This imputed data element is derived from "Imputed Police-Reported Alcohol Involvement" in the Person data file.

**SAS Name: ALCHL_IM**

## The VEHICLE Data File

The Vehicle data file includes in-transport motor vehicle data as well as driver and precrash data. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, and VEH_NO, which are described in the beginning of the Data Element Definitions and Codes section. The Vehicle data file also contains the data elements on the following pages.

CASENUM and VEH_NO are the unique identifiers for each record. CASENUM should be used to merge the Vehicle data file with the Accident data file. CASENUM and VEH_NO should be used to merge the Vehicle data file with other vehicle-level data files and the Person data file.

## V4 Number of Occupants

**Definition:** This data element is a count of the number of occupants in this vehicle.

**Additional Information:** This data element also appears in the Parkwork data file as PNUMOCCS.

**SAS Name: NUMOCCS**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | None |
| 1-98 | Number of Occupants |
| 99 | Unknown |

## V5 Unit Type

**Definition:** This data element identifies the type of unit that applies to this motor vehicle at the time it became an involved vehicle in the crash and was reported as a unit on the police crash report.

**Additional Information:** This data element also appears in the Parkwork data file as PTYPE. The valid attributes for PTYPE are:

2 Motor Vehicle Not in Transport Within the Trafficway
3 Motor Vehicle Not in Transport Outside the Trafficway
4 Working Motor Vehicle *(Highway Construction, Maintenance, Utility Only)*

**SAS Name: UNITTYPE**

**Attribute Codes**

***2016-Later***

1 Motor Vehicle in Transport *(Inside or Outside the Trafficway)*

## V6 Hit and Run

**Definition:** This data element identifies whether this vehicle was a contact vehicle in the crash that did not stop to render aid (this can include drivers who flee the scene on foot). Hit and run is coded when a motor vehicle in-transport, or its driver, departs from the scene; vehicles not in-transport are excluded. It does not matter whether the hit-and-run vehicle was striking or struck.

**Additional Information:** This data element also appears in the Parkwork data file as PHIT_RUN.

**SAS Name: HIT_RUN**

**Attribute Codes**

***2016-Later***

0 No
1 Yes
9 Unknown

## V6I Imputed Hit and Run

**Definition:** This imputed data element has the same definition and data element values as "Hit and Run," excluding value 9 for unknown hit and run.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name: HITRUN_IM**

## V9 Vehicle Make

**Definition:** This data element identifies the make (manufacturer) of this vehicle.

**Additional Information:** This data element also appears in the Person data file and in the Parkwork data file as PMAKE.

**SAS Name: MAKE**

**Attribute Codes**

***2016-Later***

1 American Motors
2 Jeep/Kaiser-Jeep/Willys-Jeep
3 AM General
6 Chrysler
7 Dodge
8 Imperial
9 Plymouth
10 Eagle
12 Ford
13 Lincoln
14 Mercury
18 Buick/Opel
19 Cadillac
20 Chevrolet
21 Oldsmobile
22 Pontiac
23 GMC
24 Saturn
25 Grumman
26 Coda
29 Other Domestic Manufacturers
*Avanti*
*Checker*
*DeSoto*
*Excalibur*
*Hudson*
*Packard*
*Panoz*
*Saleen*
*Studebaker*
*Stutz*
*Tesla*
30 Volkswagen
31 Alfa Romeo
32 Audi
33 Austin/Austin Healey
34 BMW
35 Datsun/Nissan
36 Fiat
37 Honda

## V9 Vehicle Make *(continued)*

**Attribute Codes**

***2016-Later***

38 Isuzu
39 Jaguar
40 Lancia
41 Mazda
42 Mercedes-Benz
43 MG
44 Peugeot
45 Porsche
46 Renault
47 Saab
48 Subaru
49 Toyota
50 Triumph
51 Volvo
52 Mitsubishi
53 Suzuki
54 Acura
55 Hyundai
56 Merkur
57 Yugo
58 Infiniti
59 Lexus
60 Diahatsu
61 Sterling
62 Land Rover
63 Kia
64 Daewoo
65 Smart
67 Scion
69 Other Import

*Aston Martin*
*Bentley*
*Bertone*
*Bricklin*
*Bugatti*
*Caterham*
*Citroen*
*DeLorean*
*Desta*
*Ferrari*
*Fisker*
*Gazelle*
*Hillman*
*Jensen*

## V9 Vehicle Make *(continued)*

**Attribute Codes**

***2016-Later***

69 Other Import *(continued)*
- *Koenigsegg*
- *Lada*
- *Lamborghini*
- *Lotus*
- *Mahindra*
- *Maserati*
- *Maybach*
- *McLaren*
- *Mini Cooper*
- *Morgan*
- *Morris*
- *Reliant (British)*
- *Rolls-Royce*
- *Simca*
- *Singer*
- *Spyker*
- *Sunbeam*
- *TVR*

70 BSA
71 Ducati
72 Harley-Davidson
73 Kawasaki
74 Moto-Guzzi
75 Norton
76 Yamaha
78 Other Make Moped
79 Other Make Motored Cycle
80 Brockway
81 Diamond Reo/Reo
82 Freightliner/White
83 FWD
84 International Harvester/Navistar
85 Kenworth
86 Mack
87 Peterbilt
88 Iveco/Magirus
89 White/Autocar, White/GMC
90 Bluebird
91 Eagle Coach
92 Gillig
93 MCI
94 Thomas Built

## V9 Vehicle Make *(continued)*

**Attribute Codes**

***2016-Later***

97 Not Reported
98 Other Make
*Auto-Union-DKW*
*Carpenter*
*Collins Bus*
*DINA*
*Divco*
*Hino*
*Meyers Motors*
*Mid Bus*
*Neoplan*
*Orion*
*Oshkosh*
*Scania*
*Sterling*
*Think*
*UD*
*Van Hool*
*Western Star*
99 Unknown Make

## V10 Vehicle Model

**Definition:** This data element identifies the model of this vehicle within a given make.

**Additional Information:** This data element also appears in the Parkwork data file as PMODEL.

**SAS Name:** **MODEL**

**Attribute Codes**

***2016-Later***

See the current FARS/CRSS Coding and Validation Manual for vehicle model codes.

## V11 Body Type

**Definition:** This data element identifies a classification of this vehicle based on its general body configuration, size, shape, doors, etc.

**Additional Information:** See Appendix D: Analytical Classification of Select CRSS Data Elements for the standard NCSA classifications for this data element.

This data element also appears in the Person data file and in the Parkwork data file as PBODYTYP.

**SAS Name: BODY_TYP**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| | | *AUTOMOBILES* |
| 1 | 1 | Convertible *(Excludes Sun-Roof, T-Bar)* |
| 2 | 2 | 2-Door Sedan, Hardtop, Coupe |
| 3 | 3 | 3-Door/2-Door Hatchback |
| 4 | 4 | 4-Door Sedan, Hardtop |
| 5 | 5 | 5-Door/4-Door Hatchback |
| 6 | 6 | Station Wagon *(Excluding Van And Truck Based)* |
| 7 | 7 | Hatchback, Number Of Doors Unknown |
| 8 | 8 | Sedan/Hardtop, Number of Doors Unknown |
| 9 | 9 | Other or Unknown Automobile Type |
| 17 | 17 | 3-Door Coupe |
| | | *AUTOMOBILE DERIVATIVES* |
| 10 | 10 | Auto Based Pickup *(Includes El Camino, Caballero, Ranchero, SSR, G8-ST, Baha, Brat, And Rabbit Pickup)* |
| 11 | 11 | Auto Based Panel *(Cargo Station Wagon, Auto-Based Ambulance/Hearse)* |
| 12 | 12 | Large Limousine *(More Than Four Side Doors Or Stretched Chassis)* |
| 13 | 13 | Three Wheel Automobile Or Automobile Derivative |
| | | *UTILITY VEHICLES* |
| 14 | 14 | Compact Utility *(ANSI D-16 Utility Vehicle Categories "Small" and "Midsize")* |
| 15 | 15 | Large Utility *(ANSI D-16 Utility Vehicle Categories "Full Size" and "Large")* |
| 16 | 16 | Utility Station Wagon |
| 19 | 19 | Utility Vehicle, Unknown Body Type |
| | | *VAN-BASED LIGHT TRUCKS (GVWR ≤ 10,000 LBS)* |
| 20 | 20 | Minivan |
| 21 | 21 | Large Van – Includes Van-Based Buses |
| 22 | 22 | Step Van Or Walk-In Van *(GVWR ≤ 10,000 lbs)* |
| 28 | 28 | Other Van Type |
| 29 | 29 | Unknown Van Type |
| | | *LIGHT CONVENTIONAL TRUCKS (PICKUP STYLE CAB, GVWR ≤10,000 LBS)* |
| 30 | -- | Compact Pickup *(S-10, LUV, Ram 50, Rampage, Courier, Ranger, S-5, Pup, Mazda Pickup, Mitsubishi Truck, Datsun/Nissan Pickup, Arrow Pickup, Scamp, Toyota Pickup, VW Pickup, D50, Colt P/U, T-10, S-15, T-15, Ram 100, Dakota, Sonoma)* |

## V11 Body Type *(continued)*

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 31 | -- | Standard *Pickup (C10-C35, Jeep P/U, Comanche, Ram P/U, K10-K35, D100-D350, W100-350, F100-F350, R100-500, R10-R35, V10-35, Silverado, Sierra, T100)* |
| 32 | 32 | Pickup With Slide-In Camper |
| 33 | 33 | Convertible Pickup |
| -- | 34 | Light Pickup |
| 39 | 39 | Unknown *(Pickup Style)* Light Conventional Truck |
| *OTHER LIGHT TRUCKS (GVWR ≤10,000 LBS)* | | |
| 40 | 40 | Cab Chassis Based *(Included Rescue Vehicle, Light Stake, Dump, And Tow Truck)* |
| 41 | 41 | Truck Based Panel |
| 45 | 45 | Other Light Conventional Truck Type |
| 48 | 48 | Unknown Light Truck Type |
| 49 | 49 | Unknown Light Vehicle Type *(Automobile, Utility, Van, Or Light Truck)* |
| *BUSES (EXCLUDES VAN BASED BUSES WITH A GVWR ≤ 10,000 LBS.)* | | |
| 50 | 50 | School Bus *(Designed To Carry Students, Not Cross Country Or Transit)* |
| 51 | 51 | Cross Country/Intercity Bus *(i.e., Greyhound)* |
| 52 | 52 | Transit Bus *(City Bus)* |
| 55 | 55 | Van-Based Bus GVWR > 10,000 lbs. |
| 58 | 58 | Other Bus Type |
| 59 | 59 | Unknown Bus Type |
| *MEDIUM/HEAVY TRUCKS (GVWR > 10,000 LBS)* | | |
| 60 | 60 | Step Van |
| 61 | 61 | Single-Unit Straight Truck or Cab-Chassis *(10,000 lbs<GVWR< or =19,500 lbs)* |
| 62 | 62 | Single-Unit Straight Truck or Cab-Chassis *(19,500 lbs<GVWR< or =26,000 lbs)* |
| 63 | 63 | Single-Unit Straight Truck or Cab-Chassis *(GVWR>26,000 lbs)* |
| 64 | 64 | Single Unit Straight Truck or Cab-Chassis *(GVWR unknown)* |
| 66 | 66 | Truck-Tractor *(Cab Only, Or With Any Number Of Trailing Units; Any Weight)* |
| 67 | 67 | Medium/Heavy Pickup *(GVWR > 10,000 lbs)* |
| 71 | 71 | Unknown if Single-Unit or Combination-Unit Medium Truck *(10,000 lbs < GVWR < 26,000 lbs)* |
| 72 | 72 | Unknown if Single-Unit or Combination-Unit Heavy Truck *(GVWR>26,000 lbs)* |
| 78 | 78 | Unknown Medium/Heavy Truck Type |
| 79 | 79 | Unknown Truck Type *(Light/Medium/Heavy)* |
| *MOTOR HOMES* | | |
| 42 | 42 | Light Truck Based Motor Home *(Chassis Mounted)* |
| 65 | 65 | Medium/Heavy Truck-Based Motor Home |
| 73 | 73 | Camper or Motor Home, Unknown Truck Type |

## V11 Body Type *(continued)*

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| *MOTORED CYCLES, MOPEDS, ALL-TERRAIN VEHICLES, ALL-TERRAIN CYCLES* | | |
| 80 | -- | Motorcycle |
| -- | 80 | Two Wheel Motorcycle *(excluding motor scooters)* |
| 81 | -- | Moped *(Motorized Bicycle)* |
| -- | 81 | Moped or Motorized Bicycle |
| 82 | -- | Three Wheeled Motorcycle Or Moped |
| -- | 82 | Three-wheel Motorcycle *(2 Rear Wheels)* |
| 83 | -- | Off-Road Motorcycle *(2-Wheel)* |
| -- | 83 | Off-Road Motorcycle |
| -- | 84 | Motor Scooter |
| -- | 85 | Unenclosed Three Wheel Motorcycle / Unenclosed Autocycle *(1 Rear Wheel)* |
| -- | 86 | Enclosed Three Wheel Motorcycle / Enclosed Autocycle *(1 Rear Wheel)* |
| -- | 87 | Unknown Three Wheel Motorcycle Type |
| 88 | -- | Other Motored Cycle Type *(Minibike, Motor Scooter, Pocket Motorcycles, Pocket Bikes)* |
| -- | 88 | Other Motored Cycle Type *(Mini-bikes, Pocket Motorcycles, "Pocket Bikes")* |
| 89 | 89 | Unknown Motored Cycle Type |
| 90 | 90 | ATV *(All-Terrain Vehicle)* / ATC *(All-Terrain Cycle)* |
| *OTHER VEHICLES* | | |
| 91 | 91 | Snowmobile |
| 92 | 92 | Farm Equipment Other Than Trucks |
| 93 | 93 | Construction Equipment Other Than Trucks *(Includes Graders)* |
| 94 | 94 | Low Speed Vehicle *(LSV)*/Neighborhood Electric Vehicle *(NEV)* |
| 95 | 95 | Golf Cart |
| -- | 96 | Recreational Off-Highway Vehicle *(ROV)* |
| 97 | 97 | Other Vehicle Type *(Includes Go-Cart, Fork-Lift, City Street Sweeper)* |
| 98 | 98 | Not Reported |
| 99 | 99 | Unknown Body Type |

## V11I Imputed Body Type

**Definition:** The attributes for this imputed data element have changed over the years to mirror the values for "Body Type," excluding values 49, 79, and 99 for unknown light vehicle type, unknown truck type (light/medium/heavy), and unknown body type, respectively, and value 98 for not reported body type.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **BDYTYP_IM**

## V12 Vehicle Model Year

**Definition:** This data element identifies the manufacturer's model year of this vehicle.

**Additional Information:** This data element also appears in the Person data file and in the Parkwork data file as PMODYEAR.

**SAS Name:** **MOD_YEAR**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| xxxx | Actual Model Year |
| 9998 | Not Reported |
| 9999 | Unknown |

## V12I Imputed Model Year

**Definition:** This imputed data element has the same definition and data element values as Model Year, excluding value 9999 for unknown model year and value 9998 for not reported.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **MDLYR_IM**

## V13 Vehicle Identification Number (VIN)

**Definition:** This data element records the vehicle identification number (VIN) of this vehicle assigned by the vehicle manufacturer. The VIN contains information on the vehicle such as: manufacturer, model year, model, body type, restraint type, etc.

**Additional Information:** The vehicle manufacturers use the VIN to describe certain characteristics of a vehicle and to assign a serial number to the vehicle.

If a character of the VIN is missing or undecipherable, the VIN length will be less than 12 characters.

This data element also appears in the Parkwork data file as PVIN.

**SAS Name: VIN**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 000000000000 | No VIN Required |
| xxxxxxxxxxxx | First 12 Characters of the VIN |
| 888888888888 | Not Reported |
| 999999999999 | Unknown |

## V14 Vehicle Trailing

**Definition:** This data element identifies whether this vehicle had any attached trailing units or was towing another motor vehicle. A trailing unit can be a horse trailer, fifth wheel trailer, camper, boat, truck trailer, towed vehicle or any other trailer.

**Additional Information:** This data element also appears in the Person data file and in the Parkwork data file as PTRAILER.

**SAS Name: TOW_VEH**

**Attribute Codes**

***2016-Later***

0 No Trailing Units
1 Yes, One Trailing Unit
2 Yes, Two Trailing Units
3 Yes, Three or More Trailing Units
4 Yes, Number of Trailing Units Unknown
5 Vehicle Towing Another Motor Vehicle – Fixed Linkage
6 Vehicle Towing Another Motor Vehicle – Non-fixed Linkage
9 Unknown

## V15 Trailer Vehicle Identification Number

**Definition:** This data element records the vehicle identification number (VIN) of any trailing units of a combination vehicle.

**Additional Information:** These data elements also appear in the Parkwork data file as PTRLR1VIN, PTRLR2VIN, and PTRLR3VIN.

**SAS Name: TRLR1VIN, TRLR2VIN, TRLR3VIN**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 000000000000 | No VIN Required |
| xxxxxxxxxxxx | First 12 Characters of the VIN |
| 777777777777 | No Trailing Units |
| 888888888888 | Not Reported |
| 999999999999 | Unknown |

## V16 Jackknife

**Definition:** This data element identifies whether this vehicle experienced a jackknife anytime during the unstabilized situation.

**Additional Information:** Jackknife applies to a condition which occurs to a "semi" truck (i.e., cab and one or more trailers) while in motion. The condition reflects a loss of control of the truck by the driver in which the trailer yaws more than 15 degrees from its normal straight line path behind the cab. If the final resting configuration of the vehicle is in the jackknife position, it does not necessarily mean that the vehicle has jackknifed (such as, a crash occurring while the vehicle is backing up or parking).

**SAS Name:** J_KNIFE

**Attribute Codes**

***2016-Later***

0 Not an Articulated Vehicle
1 No
2 Yes, First Event
3 Yes, Subsequent Event

## V17 Motor Carrier Identification Number (MCID)

**Definition:** This data element records the issuing authority and motor carrier identification number (if applicable) to this vehicle.

**Additional Information:** This 11-character data element is the combination of two data elements, the 2-digit "Motor Carrier Issuing Authority" code (MCARR_I1) followed by the 9-character "Identification Number" (MCARR_I2).

The Carrier Identification Number is found only on vehicles of interstate for-hire or private carriers in the transportation business. It is the unique number assigned to the Carrier by the United States Department of Commerce Commission, or the State. The number can be either a US DOT number (on interstate private carriers) or an ICC MC number (interstate for-hire carriers). Collected only for buses and trucks over 4,500 kg GVWR (Body type = 60, 64, 66-79), this data element is applicable to the following vehicles:

- Medium/Heavy Trucks: vehicles with two axles/six tires and/or gross weight greater than 10,000 pounds.
- Buses with 16 or more seats (including the driver)
- Trucks and Vans of any size carrying hazardous cargo.
- Light commercial trucks pulling a trailer with gross combination weight rating (GCWR) greater than 10,000 pounds.

This data element also appears in the Parkwork data file as PMCARR_ID.

**SAS Name: MCARR_ID**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| xxxxxxxxxxx | 11-Character Combination of MCARR_I1 followed by MCARR_I2 |
| 00000000000 | Not Applicable |
| 77777777777 | Not Reported |
| 88888888888 | None |
| 99999999999 | Unknown |

## V17A MCID Issuing Authority

**Definition:** This data element records the issuing authority if applicable to this vehicle.

**Additional Information:** This data element is only applicable for the following vehicles:

- Medium/Heavy Trucks: vehicles with two axles/six tires and/or gross weight greater than 10,000 pounds.
- Buses with 16 or more seats (including the driver)
- Trucks and Vans of any size carrying hazardous cargo.
- Light commercial trucks pulling a trailer with gross combination weight rating (GCWR) greater than 10,000 pounds.

This data element also appears in the Parkwork data file as PMCARR_I1.

**SAS Name: MCARR_I1**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Not Applicable |
| 1-56 | State Code |
| 57 | US DOT |
| 58 | MC/MX *(ICC)* |
| 77 | Not Reported |
| 88 | None |
| 95 | Canada |
| 96 | Mexico |
| 99 | Unknown |

## V17B MCID Identification Number

**Definition:** This data element records the motor carrier identification number if applicable to this vehicle.

**Additional Information:** The Carrier Identification Number is found only on vehicles of interstate for-hire or private carriers in the transportation business. It is the unique number assigned to the Carrier by the United States Department of Commerce Commission, or the State. The number can be either a US DOT number (on interstate private carriers) or an ICC MC number (interstate for-hire carriers). Collected only for buses and trucks over 4,500 kg GVWR (Body type = 60, 64, 66-79), this data element is applicable to the following vehicles:

- Medium/Heavy Trucks: vehicles with two axles/six tires and/or gross weight greater than 10,000 pounds.
- Buses with 16 or more seats (including the driver)
- Trucks and Vans of any size carrying hazardous cargo.
- Light commercial trucks pulling a trailer with gross combination weight rating (GCWR) greater than 10,000 pounds.

This data element also appears in the Parkwork data file as PMCARR_I2.

**SAS Name: MCARR_I2**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| xxxxxxxxx | Actual 9-Digit Number |
| 000000000 | Not Applicable |
| 777777777 | Not Reported |
| 888888888 | None |
| 999999999 | Unknown |

## V18 Gross Vehicle Weight Rating

**Definition:** This data element identifies the gross vehicle weight rating of this vehicle if applicable.

**Additional Information:** The Gross Vehicle Weight Rating (GVWR) or Gross Combination Weight Rating (GCWR) is a value specified by the manufacturer for a single-unit truck, truck tractor, or trailer. In the absence of a gross vehicle weight rating, an estimate of the gross weight of a fully loaded unit can be substituted.

This data element is the gross vehicle weight of the Power Unit only. The weight of trailers is not added.

This data element also appears in the Parkwork data file as PGVWR.

**SAS Name: GVWR**

**Attribute Codes**

***2016-Later***

0 Not Applicable
1 10,000 lbs or Less
2 10,001 lbs - 26,000 lbs
3 26,001 lbs or More
8 Not Reported
9 Unknown

## V19 Vehicle Configuration

**Definition:** This data element describes the general configuration of this vehicle if applicable.

**Additional Information:** Not Applicable is used for automobiles, motorcycles, passenger vans (with less than 9 seats, including driver) and single-unit light trucks or cargo vans (10,000 lbs. or less GVWR), not carrying hazardous cargo.

This data element also appears in the Parkwork data file as PV_CONFIG.

**SAS Name: V_CONFIG**

**Attribute Codes**

***2016-Later***

0 Not Applicable
1 Single-Unit Truck *(2 axles and GVWR more than 10,000 lbs.)*
2 Single-Unit Truck *(3 or More axles)*
4 Truck Pulling Trailer(s)
5 Truck Tractor *(Bobtail, i.e., Tractor Only, No Trailer)*
6 Truck Tractor/Semi-Trailer
7 Truck Tractor/Double
8 Truck Tractor/Triple
10 Vehicle 10,000 lbs or Less Placarded for Hazardous Materials
19 Truck More than 10,000 lbs, Cannot Classify
20 Bus/Large Van *(Seats for 9-15 Occupants, Including Driver)*
21 Bus *(Seats for More Than 15 Occupants, Including Driver)*
99 Unknown

## V20 Cargo Body Type

**Definition:** This data element describes the primary cargo carrying capability of this vehicle if applicable.

**Additional Information:** Passenger vehicles and light trucks that display a hazardous cargo placard are coded "No Cargo Body," as are medium/heavy trucks with no cargo carrying capability. "Not Applicable" is coded only for passenger vehicles and light trucks and vans that do not display a hazardous cargo placard.

This data element also appears in the Parkwork data file as PCARGTYP.

**SAS Name: CARGO_BT**

**Attribute Codes**

***2016-Later***

0 Not Applicable
1 Van/Enclosed Box
2 Cargo Tank
3 Flatbed
4 Dump
5 Concrete Mixer
6 Auto Transporter
7 Garbage/Refuse
8 Grain/Chips/Gravel
9 Pole-Trailer
10 Log
11 Intermodal Container Chassis
12 Vehicle Towing Another Vehicle
22 Bus
96 No Cargo Body
97 Other
98 Unknown Cargo Body Type
99 Unknown

## V21A/HM1 Hazardous Materials Involvement

**Definition:** This data element identifies whether this vehicle was carrying hazardous materials.

**Additional Information:** This data element also appears in the Parkwork data file as PHAZ_INV.

**SAS Name: HAZ_INV**

**Attribute Codes**

***2016-Later***

1 No
2 Yes

## V21B/HM2 Hazardous Materials Placard

**Definition:** This data element identifies the presence of hazardous materials for this vehicle and whether this vehicle displayed a hazardous materials placard.

**Additional Information:** This data element also appears in the Parkwork data file as PHAZPLAC.

**SAS Name: HAZ_PLAC**

**Attribute Codes**

***2016-Later***

0 Not Applicable
1 No
2 Yes
8 Not Reported

## V21C/HM3 Hazardous Material Identification Number

**Definition:** This data element identifies the 4-digit hazardous material identification number for this vehicle.

**Additional Information:** This data element also appears in the Parkwork data file as PHAZ_ID.

**SAS Name: HAZ_ID**

**Attribute Codes**

***2016-Later***

0 Not Applicable
xxxx Actual 4-Digit Number
8888 Not Reported

## V21D/HM4 Hazardous Material Class Number

**Definition:** This data element identifies the single-digit hazardous material class number for this vehicle.

**Additional Information:** This data element also appears in the Parkwork data file as PHAZ_CNO.

**SAS Name: HAZ_CNO**

**Attribute Codes**

***2016-Later***

0 Not Applicable
1 Explosives
2 Gases
3 Flammable / Combustible Liquid
4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet
5 Oxidizer and Organic Peroxide
6 Poison and Poison Inhalation Hazard
7 Radioactive
8 Corrosive
9 Miscellaneous
88 Not Reported

## V21E/HM5 Release of Hazardous Material from the Cargo Compartment

**Definition:** This data element identifies whether any hazardous cargo was released from the cargo tank or compartment of this vehicle.

**Additional Information:** This data element also appears in the Parkwork data file as PHAZ_REL.

**SAS Name: HAZ_REL**

***2016-Later***

0 Not Applicable
1 No
2 Yes
8 Not Reported

## V22 Bus Use

**Definition:** This data element describes the common type of bus service this vehicle was being used as at the time of the crash or the primary use for the bus if not in service at the time of the crash.

**Additional Information:** This data element also appears in the Parkwork data file as PBUS_USE.

**SAS Name: BUS_USE**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Not a Bus |
| 1 | School |
| 4 | Intercity |
| 5 | Charter/Tour |
| 6 | Transit/Commuter |
| 7 | Shuttle |
| 8 | Modified for Personal/Private Use |
| 98 | Not Reported |
| 99 | Unknown |

## V23 Special Use

**Definition**: This data element identifies any special use associated with this vehicle at the time of the crash.

**Additional Information:** All military vehicles are classified as "4" even if they are police, ambulance, or fire trucks.

This data element also appears in the Person data file and in the Parkwork data file as PSP_USE.

**SAS Name: SPEC_USE**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | No Special Use |
| 1 | Taxi |
| 2 | Vehicle Used for School Transport |
| 3 | Vehicle Used as Other Bus |
| 4 | Military |
| 5 | Police |
| 6 | Ambulance |
| 7 | Fire Truck |
| 8 | Non-Transport Emergency Services Vehicle |
| 13 | Incident Response |
| 98 | Not Reported |
| 99 | Unknown |

## V24 Emergency Use

**Definition:** This data element identifies whether this vehicle was engaged in emergency use. Emergency Use indicates operation of any motor vehicle that is legally authorized by a government authority to respond to emergencies with or without the use of emergency warning equipment, such as a police vehicle, fire truck or ambulance while actually engaged in such response.

**Additional Information:** This data element also appears in the Person data file and in the Parkwork data file as PEM_USE.

**SAS Name:** **EMER_USE**

**Attribute Codes**

***2016-Later***

0 Not Applicable
2 Non-Emergency, Non-Transport
3 Non-Emergency Transport
4 Emergency Operation, Emergency Warning Equipment Not In Use
5 Emergency Operation, Emergency Warning Equipment In Use
6 Emergency Operation, Emergency Warning Equipment in Use Unknown
8 Not Reported
9 Unknown

## V25 Travel Speed

**Definition:** This data element records the speed the vehicle was traveling prior to the occurrence of the crash as reported by the investigating officer.

**Additional Information:**

**SAS Name:** **TRAV_SP**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Stopped Motor Vehicle in Transport |
| 1-151 | Reported Speed Up to 151 mph |
| 997 | Speed Greater than 151 mph |
| 998 | Not Reported |
| 999 | Unknown |

## V27 Rollover

**Definition:** This data element identifies this vehicle's involvement in a rollover or overturn during the crash. Rollover is defined as any vehicle rotation of 90 degrees or more about any true longitudinal or lateral axis. Rollover can occur at any time during the crash.

**Additional Information:** This data element also appears in the Person data file.

**SAS Name: ROLLOVER**

**Attribute Codes**

***2016-Later***

0 No Rollover
1 Rollover, Tripped By Object/Vehicle
2 Rollover, Untripped
9 Rollover, Unknown Type

## V28 Location of Rollover

**Definition:** This data element identifies the location of the trip point or start of this vehicle's roll.

**Additional Information:**

**SAS Name: ROLINLOC**

**Attribute Codes**

***2016-Later***

0 No Rollover
1 On Roadway
2 On Shoulder
3 On Median/Separator
4 In Gore
5 On Roadside
6 Outside of Trafficway
7 In Parking Lane/Zone
9 Unknown

## V29A Initial Contact Point

**Definition:** This data element identifies the area on this vehicle that produced the first instance of injury to non-motorists or occupants of this vehicle, or that resulted in the first instance of damage to other property or to this vehicle.

**Additional Information:** This data element is derived from the crash events for the vehicle. It is the first recorded "Area of Impact (This Vehicle)" value for this vehicle. See Appendix E: Rules for Derived Data Elements for an explanation of this data element and how it is derived.

This data element also appears in the Person data file and in the Parkwork data file as PIMPACT1.

**SAS Name:** **IMPACT1**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | Non-Collision |
| 1-12 | 1-12 | Clock points |
| 13 | 13 | Top |
| 14 | 14 | Undercarriage |
| 18 | 18 | Cargo/Vehicle Parts Set-In-Motion |
| 19 | 19 | Other Objects Set-In-Motion |
| -- | 20 | Object Set in Motion, Unknown if Cargo/Vehicle Parts or Other |
| 61 | 61 | Left |
| 62 | 62 | Left-Front Side |
| 63 | 63 | Left-Back Side |
| 81 | 81 | Right |
| 82 | 82 | Right-Front Side |
| 83 | 83 | Right-Back Side |
| 98 | 98 | Not Reported |
| 99 | 99 | Unknown |

## V29AI Imputed Initial Contact Point

**Definition:** This imputed data element has the same definition and data element values as Initial Contact Point, excluding value 99 for unknown initial contact point and value 98 for not reported initial contact point.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **IMPACT1_IM**

## V30 Extent of Damage

**Definition:** This data element records the amount of damage sustained by this vehicle as indicated on the police crash report based on an operational damage scale.

**Additional Information:** This data element also appears in the Parkwork data file as PVEH_SEV.

**SAS Name:** **DEFORMED**

**Attribute Codes**

***2016-Later***

0 No Damage
2 Minor Damage
4 Functional Damage
6 Disabling Damage
8 Not Reported
9 Unknown

## V31 Vehicle Removal

**Definition:** This data element describes the mode by which this vehicle left the scene of the crash.

**Additional Information:** This data element also appears in the Parkwork data file as PTOWED.

**SAS Name: TOWED**

**Attribute Codes**

***2016-Later***

2 Towed Due to Disabling Damage
3 Towed Not Due to Disabling Damage
5 Not Towed
8 Not Reported
9 Unknown

## V33 Most Harmful Event

**Definition:** This data element describes the event that resulted in the most severe injury or, if no injury, the greatest property damage involving this vehicle.

**Additional Information:** "First Harmful Event" applies to the crash (HARM_EV). "Most Harmful Event" applies to the vehicle. "First Harmful Event," "Most Harmful Event," and the "Sequence of Events" data elements have the same harmful event attributes. "Sequence of Events" also has non-harmful event attributes.

This data element also appears in the Parkwork data file as PM_HARM.

**SAS Name: M_HARM**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| *NONCOLLISION* | | |
| 1 | 1 | Rollover/Overturn |
| 2 | 2 | Fire/Explosion |
| 3 | 3 | Immersion or Partial Immersion |
| 4 | 4 | Gas Inhalation |
| 5 | 5 | Fell/Jumped from Vehicle |
| 6 | 6 | Injured in Vehicle *(Non-Collision)* |
| 7 | 7 | Other Noncollision |
| 16 | 16 | Thrown or Falling Object |
| 44 | 44 | Pavement Surface Irregularity *(Ruts, Potholes, Grates, etc.)* |
| 51 | 51 | Jackknife *(Harmful to This Vehicle)* |
| 72 | 72 | Cargo/Equipment Loss or Shift *(Harmful to This Vehicle)* |
| *COLLISION WITH MOTOR VEHICLE IN TRANSPORT* | | |
| 12 | 12 | Motor Vehicle In-Transport |
| 54 | 54 | Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport |
| 55 | 55 | Motor Vehicle in Motion Outside the Trafficway |
| *COLLISION WITH OBJECT NOT FIXED* | | |
| 8 | 8 | Pedestrian |
| 9 | 9 | Pedalcyclist |
| 10 | 10 | Railway Vehicle |
| 11 | 11 | Live Animal |
| 14 | 14 | Parked Motor Vehicle |
| 15 | 15 | Non-Motorist on Personal Conveyance |
| 18 | 18 | Other Object Not Fixed |
| 45 | 45 | Working Motor Vehicle |
| 49 | 49 | Ridden Animal or Animal Drawn Conveyance |
| 73 | 73 | Object That Had Fallen From Motor Vehicle In-Transport |
| 74 | 74 | Road Vehicle on Rails |
| -- | 91 | Unknown Object Not Fixed |

## V33 Most Harmful Event *(continued)*

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| | *COLLISION WITH FIXED OBJECT* | |
| 17 | 17 | Boulder |
| 19 | 19 | Building |
| 20 | 20 | Impact Attenuator/Crash Cushion |
| 21 | 21 | Bridge Pier or Support |
| 23 | 23 | Bridge Rail *(Includes Parapet)* |
| 24 | 24 | Guardrail Face |
| 25 | 25 | Concrete Traffic Barrier |
| 26 | 26 | Other Traffic Barrier |
| 30 | 30 | Utility Pole/Light Support |
| 31 | 31 | Post, Pole or Other Support |
| 32 | 32 | Culvert |
| 33 | 33 | Curb |
| 34 | 34 | Ditch |
| 35 | 35 | Embankment |
| 38 | 38 | Fence |
| 39 | 39 | Wall |
| 40 | 40 | Fire Hydrant |
| 41 | 41 | Shrubbery |
| 42 | 42 | Tree *(Standing Only)* |
| 43 | 43 | Other Fixed Object |
| 46 | 46 | Traffic Signal Support |
| 48 | 48 | Snow Bank |
| 50 | 50 | Bridge Overhead Structure |
| 52 | 52 | Guardrail End |
| 53 | 53 | Mail Box |
| 57 | 57 | Cable Barrier |
| 58 | 58 | Ground |
| 59 | 59 | Traffic Sign Support |
| -- | 93 | Unknown Fixed Object |
| 99 | 99 | Unknown |

## V33I Imputed Most Harmful Event

**Definition:** This imputed data element has the same data element values as Most Harmful Event, excluding value 99 for unknown most harmful event.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **VEVENT_IM**

## V34 Related Factors- Vehicle Level

**Definition:** This data element records factors related to this vehicle expressed by the investigating officer.

**Additional Information:** There are also crash-level-related factors in the Accident data file, CF1, CF2, and CF3; driver-related factors in the Vehicle data file, namely DR_SF1, DR_SF2, DR_SF3 and DR_SF4; and person-related factors P_SF1, P_SF2, and P_SF3 in the Person data file.

The CRSS coder may have used either of the two data elements to code a related factor. One must test both data elements to insure that the selected related factor is included.

These data elements also appear in the Parkwork data file as PVEH_SC1 and PVEH_SC2.

**SAS Name: VEH_SC1, VEH_SC2**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | None |
| 30 | Multi-Wheeled Motorcycle Conversion |
| 33 | Vehicle Being Pushed by Non-Motorist |
| 35 | Reconstructed/Altered Vehicle |
| 39 | Highway Construction, Maintenance or Utility Vehicle, In Transport *(Inside or Outside Work Zone)* |
| 40 | Highway Incident Response Vehicle |
| 41 | Police Fire or EMS Vehicle Working at the Scene of an Emergency or Performing Other Traffic Control Activities |
| 42 | Other Working Vehicle *(Not Construction, Maintenance, Utility, Police, Fire, or EMS Vehicle)* |
| 44 | Adaptive Equipment |
| 99 | Unknown |

## V35 Fire Occurrence

**Definition:** This data element identifies whether a fire in any way related to the crash occurred in this vehicle.

**Additional Information:** This data element also appears in the Person data file and in the Parkwork data file as PFIRE.

**SAS Name:** **FIRE_EXP**

**Attribute Codes**

***2016-Later***

0 No or Not Reported
1 Yes

## V90 Maximum Injury Severity in Vehicle

**Definition:** This data element records the single most severe injury level reported for any occupant in this vehicle. This data element is derived by comparing "Injury Severity" from the Person data file for each occupant record in this vehicle. The following is the order of severity codes.

- 4-Fatal
- 3-Suspected Serious Injury
- 2-Suspected Minor Injury
- 1-Possible Injury
- 5-Injured, Unknown Severity
- 0-No Apparent Injury
- 6-Died Prior
- 9- Unknown/Not Reported
- 8-No Person in Vehicle

**Additional Information:** See Appendix E: Rules for Derived Data Elements for an expanded explanation of this data element and how it is derived.

**SAS Name: MAX_VSEV**

**Attribute Codes**

***2016-Later***

0 No Apparent Injury
1 Possible Injury
2 Suspected Minor Injury
3 Suspected Serious Injury
4 Fatal
5 Injured, Severity Unknown
6 Died Prior to Crash
8 No Person in Vehicle
9 Unknown/Not Reported

## V90I Imputed Maximum Injury Severity in Vehicle

**Definition:** This imputed data element has the same definition and data element values as Maximum Injury Severity in Vehicle, excluding value 9 for unknown maximum injury severity.

**Additional Information:** See the CRSS Imputation section of this manual.

The data element is derived from "Imputed Injury Severity" in the Person data file.

**SAS Name: MXVSEV_IM**

## V91 Number Injured in Vehicle

**Definition:** This data element records the number of persons injured in the vehicle and is derived by counting all the persons with "Injury Severity" of (1, 2, 3, 4, or 5) in a vehicle. This count includes fatally injured occupants.

**Additional Information:** See Appendix E: Rules for Derived Data Elements for an expanded explanation of this data element and how it is derived.

**SAS Name: NUM_INJV**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | No Person Injured in Vehicle |
| 1-97 | Actual Number |
| 98 | No Person in the Vehicle |
| 99 | All Persons in the Vehicle are Unknown if Injured |

## V91I Imputed Number Injured in Vehicle

**Definition:** This imputed data element has the same definition and data element values as "Number Injured in Vehicle," excluding value 99 for unknown number injured, which is imputed, and the attribute code 98, which is converted to code 0.

**Additional Information:** See the CRSS Imputation section of this manual.

This data element is derived from "Imputed Injury Severity" in the Person data file.

**SAS Name: NUMINJ_IM**

## V92 Driver Drinking in Vehicle

**Definition:** This data element records alcohol use by the driver of the vehicle. The data element is derived from "Police-Reported Alcohol Involvement" in the Person data file.

**Additional Information:** See Appendix E: Rules for Derived Data Elements for an expanded explanation of this data element and how it is derived.

**SAS Name:** **VEH_ALCH**

**Attribute Codes**

***2016-Later***

1 Alcohol Involved
2 No Alcohol Involved
8 No Driver Present/Unknown if Driver Present
9 Unknown

## V92I Imputed Driver Drinking in Vehicle

**Definition:** This data element has the same definition and data element values as Driver "Drinking in Vehicle," excluding value 9 for unknown alcohol involvement, which is imputed, and value 8, which is converted to attribute code 2.

**Additional Information:** See the CRSS Imputation section of this manual.

This imputed data element is derived from "Imputed Police-Reported Alcohol Involvement" in the Person data file.

**SAS Name:** **V_ALCH_IM**

## V100 Make Model Combined

**Definition:** This derived data element represents the 5-digit combination of two data elements, the 2-digit "Vehicle Make" code (MAKE) followed by the 3-digit "Vehicle Model" code (MODEL).

**Additional Information:** This data element also appears in the Person data file and in the Parkwork data file as PMAK_MOD.

**SAS Name: MAK_MOD**

**Attribute Codes**

***2016-Later***

See the current FARS/CRSS Coding and Validation Manual for vehicle make and model codes.

## D4 Driver Presence

**Definition:** This data element identifies whether a driver was present in this vehicle at the onset of the unstabilized situation.

**Additional Information:**

**SAS Name: DR_PRES**

**Attribute Codes**

***2016-Later***

0 No Driver Present / Not Applicable
1 Yes
9 Unknown

## D6 Driver's Zip Code

**Definition:** This data element records the zip code of the driver's address as listed on the police crash report.

**Additional Information:**

**SAS Name:** DR_ZIP

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 00000 | Not Resident of U.S. or Territories |
| xxxxx | Actual Zip Code |
| 99997 | No Driver Present/Unknown if Driver Present |
| 99999 | Unknown |

## D22 Speeding Related

**Definition:** This data element records whether the driver's speed was related to the crash as indicated by law enforcement.

**Additional Information:**

**SAS Name: SPEEDREL**

**Attribute Codes**

***2016-Later***

0 No
2 Yes, Racing
3 Yes, Exceeded Speed Limit
4 Yes, Too Fast for Conditions
5 Yes, Specifics Unknown
8 No Driver Present/Unknown if Driver Present
9 Unknown

## D24 Related Factors- Driver Level

**Definition:** This data element records factors related to this driver expressed by the investigating officer.

**Additional Information:** There are also crash-level-related factors in the Accident data file, CF1, CF2, and CF3; vehicle-related factors, namely VEH_SC1 and VEH_SC2 in the Vehicle data file; and person-related factors P_SF1, P_SF2, and P_SF3 in the person data file.

The CRSS coder may have used any of the four data elements to code a related factor. One must test all four data elements to insure that the selected related factor is included.

The person-related factors P_SF1, P_SF2, and P_SF3 are all set to 0 for drivers.

**SAS Name: DR_SF1, DR_SF2, DR_SF3, DR_SF4**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | None |
| *PHYSICAL / MENTAL CONDITION* | | |
| 6 | 6 | Careless Driving |
| 8 | 8 | Road Rage/Aggressive Driving |
| *MISCELLANEOUS FACTORS* | | |
| 16 | 16 | Police or Law Enforcement Officer |
| 18 | 18 | Traveling on Prohibited Trafficways |
| 20 | 20 | Leaving Vehicle Unattended with Engine Running; Leaving Vehicle Unattended in Roadway |
| 21 | 21 | Overloading or Improper Loading of Vehicle with Passenger or Cargo |
| 22 | 22 | Towing or Pushing Vehicle Improperly |
| 23 | 23 | Failing to Dim Lights or to Have Lights on When Required |
| 24 | 24 | Operating Without Required Equipment |
| 32 | 32 | Opening Vehicle Closure into Moving Traffic or Vehicle is in Motion or Operating at Erratic or Suddenly Changing Speeds |
| 36 | 36 | Operating the Vehicle in an Erratic, Reckless, Careless or Negligent Manner |
| 37 | 37 | Police Pursuing this Driver or Police Officer in Pursuit |
| 50 | 50 | Driving Wrong Way on One-Way Trafficway |
| 51 | 51 | Driving on Wrong Side of Two-Way Trafficway *(Intentionally or Unintentionally)* |
| 54 | 54 | Stopping in Roadway *(Vehicle Not Abandoned)* |
| -- | 55 | Improper Management of Vehicle Controls |
| -- | 56 | Object Interference with Vehicle Controls |
| -- | 57 | Driving with Tire-Related Problems |
| 58 | 58 | Over Correcting |
| 59 | 59 | Getting Off/Out of a Vehicle |
| -- | 60 | Alcohol and/or Drug Test Refused |
| *SPECIAL CIRCUMSTANCES* | | |
| 91 | 91 | Non-Traffic Violation Charged *(Manslaughter, Homicide or Other Assault Offense Committed Without Malice)* |
| 99 | 99 | Unknown |

## PC5 Trafficway Description

**Definition:** This data element identifies the attribute that best describes the trafficway flow just prior to this vehicle's critical precrash event.

**Additional Information:**

**SAS Name:** **VTRAFWAY**

**Attribute Codes**

***2016-Later***

0 Non-Trafficway or Driveway Access
1 Two-Way, Not Divided
2 Two-Way, Divided, Unprotected Median
3 Two-Way, Divided, Positive Median Barrier
4 One-Way Trafficway
5 Two-Way, Not Divided With a Continuous Left-Turn Lane
6 Entrance/Exit Ramp
8 Not Reported
9 Unknown

## PC6 Total Lanes in Roadway

**Definition:** This data element identifies the attribute that best describes the number of travel lanes just prior to this vehicle's critical precrash event.

**Additional Information:** The number of lanes refers to the number of lanes of a continuous cross-section of roadway. For example, a local roadway with one lane going north and one lane going south would be coded as two lanes. However, if a trafficway is a divided highway with two lanes going north, a median, and two lanes going south, then the number of lanes is coded as two. If a trafficway has two lanes going north immediately adjacent to two lanes going south, one continuous cross-section of roadway, then the number of lanes is coded as four. This data element can be used with the Trafficway Description data element VTRAFWAY to determine the trafficway geometry. For example: If (VNUM_LAN=2) AND (VTRAFWAY=1), then one has a two-lane roadway that is not physically divided, which is what most people think of as a two-lane road (i.e., one lane going in each direction).

If the roadway is a divided trafficway, the number of travel lanes counts only lanes in the direction of travel of the first harmful event. If the roadway is an undivided trafficway, the number of travel lanes are all the lanes regardless of their direction of travel.

**SAS Name: VNUM_LAN**

**Attribute Codes**

***2016-Later***

0 Non-Trafficway or Driveway Access
1 One Lane
2 Two Lanes
3 Three Lanes
4 Four Lanes
5 Five Lanes
6 Six Lanes
7 Seven or More Lanes
8 Not Reported
9 Unknown

## PC7 Speed Limit

**Definition:** This data element records the posted speed limit in miles per hour.

**Additional Information:**

**SAS Name: VSPD_LIM**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | No Statutory Limit/Non-Trafficway or Driveway Access |
| 5-95 | Speed Limit *(In 5 mph Increments)* |
| 98 | Not Reported |
| 99 | Unknown |

## PC8 Roadway Alignment

**Definition:** This data element identifies the attribute that best represents the roadway alignment prior to this vehicle's critical precrash event.

**Additional Information:**

**SAS Name: VALIGN**

**Attribute Codes**

***2016-Later***

0 Non-Trafficway or Driveway Access
1 Straight
2 Curve Right
3 Curve Left
4 Curve – Unknown Direction
8 Not Reported
9 Unknown

## PC9 Roadway Grade

**Definition:** This data element identifies the attribute that best represents the roadway grade prior to this vehicle's critical precrash event.

**Additional Information:**

**SAS Name: VPROFILE**

**Attribute Codes**

***2016-Later***

0 Non-Trafficway or Driveway Access
1 Level
2 Grade, Unknown Slope
3 Hillcrest
4 Sag *(Bottom)*
5 Uphill
6 Downhill
8 Not Reported
9 Unknown

## PC11 Roadway Surface Condition

**Definition:** This data element identifies the attribute that best represents the roadway surface condition prior to this vehicle's critical precrash event.

**Additional Information:**

**SAS Name: VSURCOND**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Non-Trafficway or Driveway Access |
| 1 | Dry |
| 2 | Wet |
| 3 | Snow |
| 4 | Ice/Frost |
| 5 | Sand |
| 6 | Water *(Standing or Moving)* |
| 7 | Oil |
| 8 | Other |
| 10 | Slush |
| 11 | Mud, Dirt, Gravel |
| 98 | Not Reported |
| 99 | Unknown |

## PC12 Traffic Control Device

**Definition:** This data element identifies the attribute that best describes the traffic controls in the vehicle's environment just prior to this vehicle's critical precrash event.

**Additional Information:** If a vehicle is controlled by more than one device, the device coded is based on the following priority:

- 51 - Officer, Crossing Guard, Flagman, etc.
- The lowest numbered device shown below
- 0 - No traffic control device.

See Appendix D: Analytical Classification of Select CRSS Data Elements for the standard NCSA classifications for this data element.

**SAS Name: VTRAFCON**

**Attribute Codes**

***2016-Later***

0 No Controls

*TRAFFIC SIGNALS*

1 Traffic Control Signal *(On Colors)* Without Pedestrian Signal
2 Traffic Control Signal *(On Colors)* With Pedestrian Signal
3 Traffic Control Signal *(On Colors)* Not Known if Pedestrian Signal
4 Flashing Traffic Control Signal
7 Lane Use Control Signal
8 Other Highway Traffic Signal
9 Unknown Highway Traffic Signal

*REGULATORY SIGNS*

20 Stop Sign
21 Yield Sign
23 School Zone Sign/Device
28 Other Regulatory Sign
29 Unknown Regulatory Sign

*OTHER*

40 Warning Sign
50 Person
65 Railway Crossing Device
97 Not Reported
98 Other
99 Unknown

## PC13 Traffic Control Device Functioning

**Definition:** This data element identifies the functionality of the traffic control device recorded for this vehicle in the data element "Traffic Control Device."

**Additional Information:**

**SAS Name:** **VTCONT_F**

**Attribute Codes**

***2016-Later***

0 No Controls
1 Device Not Functioning
2 Device Functioning – Functioning Improperly
3 Device Functioning Properly
8 Not Reported
9 Unknown

## PC17 Pre-Event Movement (Prior to Recognition of Critical Event)

**Definition:** This data element identifies the attribute that best describes this vehicle's activity prior to the driver's realization of an impending critical event or just prior to impact if the driver took no action or had no time to attempt any evasive maneuvers.

**Additional Information:** These data elements were designed to identify: (1) what the vehicle was doing just prior to the critical precrash event, (2) what made the vehicle's situation critical, (3) what was the corrective action made, if any, to this critical situation, and what was the (4) location and (5) stability of the vehicle just prior to impact.

**SAS Name: P_CRASH1**

**Attribute Codes**

***2016-Later***

0 No Driver Present/Unknown if Driver Present
1 Going Straight
2 Decelerating in Road
3 Accelerating in Road
4 Starting in Road
5 Stopped in Roadway
6 Passing or Overtaking Another Vehicle
7 Disabled or Parked in Travel Lane
8 Leaving a Parking Position
9 Entering a Parking Position
10 Turning Right
11 Turning Left
12 Making a U-turn
13 Backing Up *(Other Than for Parking Position)*
14 Negotiating a Curve
15 Changing Lanes
16 Merging
17 Successful Corrective Action to a Previous Critical Event
98 Other
99 Unknown

## PC17I Imputed Pre-Event Movement (Prior to Recognition of Critical Event)

**Definition:** This imputed data element has the same definition and data element values as Movement Prior to Critical Event, excluding value 99 for unknown movement prior to critical event.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name: PCRASH1_IM**

## PC19 Critical Event- Precrash

**Definition:** This data element identifies the attribute that best describes the critical event which made this crash imminent (i.e., something occurred which made the collision possible).

**Additional Information:** A critical event is coded for each vehicle and identifies the circumstances leading to the vehicle's first impact in the crash.

These data elements were designed to identify: (1) what the vehicle was doing just prior to the critical precrash event, (2) what made the vehicle's situation critical, (3) what was the corrective action made, if any, to this critical situation, and what was the (4) location and (5) stability of the vehicle just prior to impact.

**SAS Name: P_CRASH2**

**Attribute Codes**

***2016-Later***

*THIS VEHICLE LOSS OF CONTROL DUE TO:*

1 Blow Out/Flat Tire
2 Stalled Engine
3 Disabling Vehicle Failure *(e.g., Wheel Fell Off)*
4 Non-Disabling Vehicle Problem *(e.g., Hood Flew Up)*
5 Poor Road Conditions *(Puddle, Pothole, Ice, etc.)*
6 Traveling Too Fast For Conditions
8 Other Cause of Control Loss
9 Unknown Cause of Control Loss

*THIS VEHICLE TRAVELING:*

10 Over The Lane Line on Left Side of Travel Lane
11 Over The Lane Line on Right Side of Travel Lane
12 Off The Edge of The Road on The Left Side
13 Off The Edge of The Road on The Right Side
14 End Departure
15 Turning Left
16 Turning Right
17 Crossing Over *(Passing Through)* Junction
18 This Vehicle Decelerating
19 Unknown Travel Direction
20 Backing
21 Making a U-Turn

*OTHER MOTOR VEHICLE IN LANE*

50 Other Vehicle Stopped
51 Traveling in Same Direction with Lower Steady Speed
52 Traveling in Same Direction while Decelerating
53 Traveling in Same Direction with Higher Speed
54 Traveling in Opposite Direction
55 In Crossover
56 Backing
59 Unknown Travel Direction Of The Other Motor Vehicle in Lane

## PC19 Critical Event- Precrash *(continued)*

**Attribute Codes**

***2016-Later***

*OTHER MOTOR VEHICLE ENCROACHING INTO LANE*

60 From Adjacent Lane *(Same Direction)*-Over Left Lane Line
61 From Adjacent Lane *(Same Direction)*-Over Right Lane Line
62 From Opposite Direction Over Left Lane Line
63 From Opposite Direction Over Right Lane Line
64 From Parking Lane/Shoulder, Median/Crossover, Roadside
65 From Crossing Street, Turning Into Same Direction
66 From Crossing Street, Across Path
67 From Crossing Street, Turning Into Opposite Direction
68 From Crossing Street, Intended Path Not Known
70 From Driveway, Turning Into Same Direction
71 From Driveway, Across Path
72 From Driveway, Turning Into Opposite Direction
73 From Driveway, Intended Path Not Known
74 From Entrance to Limited Access Highway
78 Encroaching By Other Vehicle – Details Unknown

*PEDESTRIAN, PEDACYLIST OR OTHER NON-MOTORIST*

80 Pedestrian in Road
81 Pedestrian Approaching Road
82 Pedestrian Unknown Location
83 Pedalcyclist/Other Non-Motorist in Road
84 Pedalcyclist/Other Non-Motorist Approaching Road
85 Pedalcyclist Or Other Non-Motorist Unknown Location

*OBJECT OR ANIMAL*

87 Animal in Road
88 Animal Approaching Road
89 Animal Unknown Location
90 Object in Road
91 Object Approaching Road
92 Object Unknown Location

*OTHER*

98 Other Critical Precrash Event

*UNKNOWN*

99 Unknown

## PC20 Attempted Avoidance Maneuver

**Definition:** This data element identifies the attribute that best describes the movements/actions taken by this driver, within a critical crash envelope, in response to the "Critical Precrash Event."

**Additional Information:** This data element identifies the actions taken by the driver in response to the impending danger. Because this data element focuses upon the driver's action just prior to the first harmful event it is coded independently of any maneuvers associated with this vehicle's "Crash Type."

These data elements were designed to identify: (1) what the vehicle was doing just prior to the critical precrash event, (2) what made the vehicle's situation critical, (3) what was the corrective action made, if any, to this critical situation, and what was the (4) location and (5) stability of the vehicle just prior to impact.

**SAS Name: P_CRASH3**

**Attribute Codes**

***2016-Later***

0 No Driver Present/Unknown if Driver Present
1 No Avoidance Maneuver
5 Releasing Brakes
6 Steering Left
7 Steering Right
8 Braking And Steering Left
9 Braking And Steering Right
10 Accelerated
11 Accelerating And Steering Left
12 Accelerating And Steering Right
15 Braking and Unknown Steering Direction
16 Braking
98 Other Actions
99 Unknown/Not Reported

## PC21 Pre-Impact Stability

**Definition:** This data element identifies the attribute that best describes the stability of this vehicle after the "Critical Precrash Event," but before the impact.

**Additional Information:** These data elements were designed to identify: (1) what the vehicle was doing just prior to the critical precrash event, (2) what made the vehicle's situation critical, (3) what was the corrective action made, if any, to this critical situation, and what was the (4) location and (5) stability of the vehicle just prior to impact.

**SAS Name: PCRASH4**

**Attribute Codes**

***2016-Later***

0 No Driver Present/Unknown if Driver Present
1 Tracking
2 Skidding Longitudinally – Rotation Less Than 30 Degrees
3 Skidding Laterally – Clockwise Rotation
4 Skidding Laterally – Counterclockwise Rotation
5 Skidding Laterally – Rotation Direction Unknown
7 Other Vehicle Loss-of-Control
9 Precrash Stability Unknown

## PC22 Pre-Impact Location

**Definition:** This data element identifies the attribute that best describes the location of this vehicle after the "Critical Precrash Event," but before the impact.

**Additional Information:** These data elements were designed to identify: (1) what the vehicle was doing just prior to the critical precrash event, (2) what made the vehicle's situation critical, (3) what was the corrective action made, if any, to this critical situation, and what was the (4) location and (5) stability of the vehicle just prior to impact.

**SAS Name: PCRASH5**

**Attribute Codes**

***2016-Later***

0 No Driver Present/Unknown if Driver Present
1 Stayed In Original Travel Lane
2 Stayed On Roadway But Left Original Travel Lane
3 Stayed On Roadway, Not Known If Left Original Travel Lane
4 Departed Roadway
5 Remained Off Roadway
6 Returned To Roadway
7 Entered Roadway
9 Unknown

## PC23 Crash Type

**Definition:** This data element identifies the attribute that best describes the type of crash this vehicle was involved in based on the "First Harmful Event" and the precrash circumstances. For graphic descriptions of possible values see Appendix A: PC23 Crash Type Diagram.

**Additional Information:**

**SAS Name: ACC_TYPE**

**Attribute Codes**

***2016-Later***

0 No Impact

**CATEGORY I: SINGLE DRIVER**

*CONFIGURATION A: RIGHT ROADSIDE DEPARTURE*

1 Drive Off Road
2 Control/Traction Loss
3 Avoid Collision with Vehicle, Pedestrian, Animal
4 Specifics Other
5 Specifics Unknown

*CONFIGURATION B: LEFT ROADSIDE DEPARTURE*

6 Drive Off Road
7 Control/Traction Loss
8 Avoid Collision With Vehicle, Pedestrian, Animal
9 Specifics Other
10 Specifics Unknown

*CONFIGURATION C: FORWARD IMPACT*

11 Parked Vehicle
12 Stationary Object
13 Pedestrian/Animal
14 End Departure
15 Specifics Other
16 Specifics Unknown

**CATEGORY II: SAME TRAFFICWAY, SAME DIRECTION**

*CONFIGURATION D: REAR END*

20 Stopped
21 Stopped, Straight
22 Stopped, Left
23 Stopped, Right
24 Slower
25 Slower, Going Straight
26 Slower, Going Left
27 Slower, Going Right
28 Decelerating *(Slowing)*
29 Decelerating *(Slowing)*, Going Straight

## PC23 Crash Type *(continued)*

**Attribute Codes**

***2016-Later***

30 Decelerating *(Slowing)*, Going Left
31 Decelerating *(Slowing)*, Going Right
32 Specifics Other
33 Specifics Unknown

*CONFIGURATION E: FORWARD IMPACT*

34 This Vehicles Frontal Area Impacts Another Vehicle.
35 This Vehicle Is Impacted by Frontal Area of Another Vehicle
36 This Vehicles Frontal Area Impacts Another Vehicle.
37 This Vehicle Is Impacted by Frontal Area of Another Vehicle
38 This Vehicles Frontal Area Impacts Another Vehicle.
39 This Vehicle Is Impacted by Frontal Area of Another Vehicle
40 This Vehicles Frontal Area Impacts Another Vehicle.
41 This Vehicle Is Impacted by Frontal Area of Another Vehicle
42 Specifics Other
43 Specifics Unknown

*CONFIGURATION F: SIDESWIPE/ANGLE*

44 Straight Ahead on Left.
45 Straight Ahead on Left/Right.
46 Changing Lanes to the Right
47 Changing Lanes to the Left
48 Specifics Other
49 Specifics Unknown

**CATEGORY III: SAME TRAFFICWAY, OPPOSITE DIRECTION**

*CONFIGURATION G: HEAD-ON*

50 Lateral Move *(Left/Right)*
51 Lateral Move *(Going Straight)*
52 Specifics Other
53 Specifics Unknown

*CONFIGURATION H: FORWARD IMPACT*

54 This Vehicles Frontal Area Impacts Another Vehicle.
55 This Vehicle Is Impacted by Frontal Area of Another Vehicle
56 This Vehicles Frontal Area Impacts Another Vehicle.
57 This Vehicle Is Impacted by Frontal Area of Another Vehicle
58 This Vehicles Frontal Area Impacts Another Vehicle.
59 This Vehicle Is Impacted by Frontal Area of Another Vehicle
60 This Vehicles Frontal Area Impacts Another Vehicle.
61 This Vehicle Is Impacted by Frontal Area of Another Vehicle
62 Specifics Other
63 Specifics Unknown

## PC23 Crash Type *(continued)*

**Attribute Codes**

***2016-Later***

*CONFIGURATION I: SIDESWIPE/ANGLE*

64 Lateral Move *(Left/Right)*
65 Lateral Move *(Going Straight)*
66 Specifics Other
67 Specifics Unknown

**CATEGORY IV: CHANGING TRAFFICWAY, VEHICLE TURNING**

*CONFIGURATION J: TURN ACROSS PATH*

68 Initial Opposite Directions *(Left/Right)*
69 Initial Opposite Directions *(Going Straight)*
70 Initial Same Directions *(Turning Right)*
71 Initial Same Directions *(Going Straight)*
72 Initial Same Directions *(Turning Left)*
73 Initial Same Directions *(Going Straight)*
74 Specifics Other
75 Specifics Unknown

*CONFIGURATION K: TURN INTO PATH*

76 Turn Into Same Direction *(Turning Left)*
77 Turn Into Same Direction *(Going Straight)*
78 Turn Into Same Direction *(Turning Right)*
79 Turn Into Same Direction *(Going Straight)*
80 Turn Into Opposite Directions *(Turning Right)*
81 Turn Into Opposite Directions *(Going Straight)*
82 Turn Into Opposite Directions *(Turning Left)*
83 Turn Into Opposite Directions *(Going Straight)*
84 Specifics Other
85 Specifics Unknown

**CATEGORY V: INTERSECTING PATHS (VEHICLE DAMAGE)**

*CONFIGURATION L: STRAIGHT PATHS*

86 Striking from the Right
87 Struck on the Right
88 Striking from the Left
89 Struck on the Left
90 Specifics Other
91 Specifics Unknown

**CATEGORY VI: MISCELLANEOUS**

*CONFIGURATION M: BACKING, ETC.*

92 Backing Vehicle
93 Other Vehicle or Object
93 Other Vehicle
97 Untripped Rollover
98 Other Crash Type
99 Unknown Crash Type

## The PERSON Data File

The Person data file includes motorist and non-motorist data. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, VEH_NO, and PER_NO, which are described in the beginning of the Data Element Definitions and Codes section. The Person data file also contains the data elements on the following pages.

CASENUM, VEH_NO, and PER_NO are the unique identifiers for each record. CASENUM should be used to merge the Person data file with the Accident data file for a set of all motorists and non-motorists. CASENUM and VEH_NO should be used to merge the Person data file with the Vehicle and Parkwork data files for a set of all motor vehicle occupants. CASENUM and PER_NO should be used to merge the Person data file with non-motorist person-level data files.

In the Person data file, motor vehicle occupants are PER_TYPE = 1, 2, 3, 9. Motor vehicle occupants have assigned vehicle numbers starting with 1. When PER_TYPE = 3, the occupied vehicle will be found in the PARKWORK data file. Non-motor vehicle occupants are PER_TYPE = 4, 5, 6, 7, 8, 10 or 19. VEH_NO = 0 for non-motor vehicle occupants.

## P5/NM5 Age

**Definition:** This data element identifies this person's age at the time of the crash, in years, with respect to their last birthday.

**Additional Information:**

**SAS Name:** AGE

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Less than One Year |
| 1-120 | Years of Age |
| 998 | Not Reported |
| 999 | Unknown |

## P5/NM5I Imputed Age

**Definition:** This imputed data element has the same definition and data element values as Age, excluding the value 999 for unknown age and value 998 for not reported age.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** AGE_IM

## P6/NM6 Sex

**Definition:** This data element identifies the sex of this person involved in the crash.

**Additional Information:**

**SAS Name:** SEX

**Attribute Codes**

***2016-Later***

1 Male
2 Female
8 Not Reported
9 Unknown

## P6/NM6I Imputed Sex

**Definition:** This imputed data element has the same definition and data element values as Sex, excluding value 9 for unknown sex and value 8 for not reported sex.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** SEX_IM

## P7/NM7 Person Type

**Definition:** This data element describes the role of this person involved in the crash.

**Additional Information:** See Appendix D: Analytical Classification of Select CRSS Data Elements for the standard NCSA classifications for this data element.

**SAS Name:** **PER_TYP**

**Attribute Codes**

***2016-Later***

*MOTORISTS*

1 Driver of a Motor Vehicle in Transport
2 Passenger of a Motor Vehicle in Transport
9 Unknown Occupant Type in a Motor Vehicle in Transport

*NON-MOTORISTS-OCCUPANT*

3 Occupant of a Motor Vehicle Not in Transport
4 Occupant of a Non-Motor Vehicle Transport Device

*NON-MOTORISTS-NON-OCCUPANT*

5 Pedestrian
6 Bicyclist
7 Other Cyclist
8 Persons on Personal Conveyances
10 Persons in or on Buildings
19 Unknown Type of Non-Motorist

## P8/NM8 Injury Severity

**Definition:** This data element describes the severity of the injury to this person in the crash using the KABCO scale.

**Additional Information:** See the Accident data file for C90 Maximum Injury Severity in Crash and the Vehicle data file for V90 Maximum Injury Severity in Vehicle, both of which are derived from this data element.

See Appendix D: Analytical Classification of Select CRSS Data Elements for the standard NCSA classifications for this data element.

**SAS Name: INJ_SEV**

**Attribute Codes**

***2016-Later***

0 No Apparent Injury *(O)*
1 Possible Injury *(C)*
2 Suspected Minor Injury *(B)*
3 Suspected Serious Injury *(A)*
4 Fatal Injury *(K)*
5 Injured, Severity Unknown *(U)*
6 Died Prior to Crash
9 Unknown/Not Reported

## P8/NM8I Imputed Injury Severity

**Definition:** This imputed data element has the same definition and data element values as Injury Severity, excluding value 9 for unknown if injured or not reported if injured.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name: INJSEV_IM**

## P9 Seating Position

**Definition:** This data element identifies the location of this person in or on the vehicle.

**Additional Information:** More than one person can be assigned the same seat position, however this is coded only when a person is sitting on someone's lap.

**SAS Name:** **SEAT_POS**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Not a Motor Vehicle Occupant |
| 11 | Front Seat – Left Side *(Driver's Side)* |
| 12 | Front Seat – Middle |
| 13 | Front Seat – Right Side |
| 18 | Front Seat – Other |
| 19 | Front Seat – Unknown |
| 21 | Second Seat – Left Side |
| 22 | Second Seat – Middle |
| 23 | Second Seat – Right Side |
| 28 | Second Seat – Other |
| 29 | Second Seat – Unknown |
| 31 | Third Seat – Left Side |
| 32 | Third Seat – Middle |
| 33 | Third Seat – Right Side |
| 38 | Third Seat – Other |
| 39 | Third Seat – Unknown |
| 41 | Fourth Seat – Left Side |
| 42 | Fourth Seat – Middle |
| 43 | Fourth Seat – Right Side |
| 48 | Fourth Seat – Other |
| 49 | Fourth Seat – Unknown |
| 50 | Sleeper Section of Cab *(Truck)* |
| 51 | Other Passenger in Enclosed Passenger or Cargo Area |
| 52 | Other Passenger in Unenclosed Passenger or Cargo Area |
| 53 | Other Passenger in Passenger or Cargo Area, Unknown Whether or Not Enclosed |
| 54 | Trailing Unit |
| 55 | Riding on Exterior of Vehicle |
| 98 | Not Reported |
| 99 | Unknown |

## P9I Imputed Seating Position

**Definition:** This imputed data element has the same definition and data element values as Seating Position, excluding values 19, 29, 39, 49 and 99 for unknown seating position and values 98 for not reported seating position.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **SEAT_IM**

## P10 Restraint System/Helmet Use

**Definition:** This data element records the restraint equipment in use by the occupant, or the helmet in use by a motorcyclist, at the time of the crash, as reported on the police crash report.

**Additional Information:** See Appendix D: Analytical Classification of Select CRSS Data Elements for the standard NCSA classifications for this data element.

**SAS Name:** **REST_USE**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | -- | Not Applicable |
| 1 | 1 | Shoulder Belt Only Used |
| 2 | 2 | Lap Belt Only Used |
| 3 | 3 | Lap and Shoulder Belt Used |
| 4 | 4 | Child Restraint Type Unknown |
| 5 | 5 | DOT-Compliant Motorcycle Helmet |
| 7 | -- | None Used |
| 8 | 8 | Restraint Used – Type Unknown |
| 10 | 10 | Child Restraint System – Forward Facing |
| 11 | 11 | Child Restraint System – Rear Facing |
| 12 | 12 | Booster Seat |
| 16 | 16 | Helmet, Other than DOT-Compliant Motorcycle Helmet |
| 17 | 17 | No Helmet |
| 19 | 19 | Helmet, Unknown if DOT-Compliant |
| -- | 20 | None Used / Not Applicable |
| 29 | 29 | Unknown if Helmet Worn |
| 96 | 96 | Not a Motor Vehicle Occupant |
| 97 | 97 | Other |
| 98 | 98 | Not Reported |
| 99 | 99 | Unknown |

## P11 Indication of Misuse of Restraint System/Helmet

**Definition:** This data element identifies any mis-use of the restraint system or helmet used by this person.

**Additional Information:**

**SAS Name: REST_MIS**

**Attribute Codes**

***2016-Later***

0 No
1 Yes
8 Not a Motor Vehicle Occupant

## P12 Air Bag Deployed

**Definition:** This data element records air bag availability and deployment for this person as reported in the police crash report.

**Additional Information:** This data element is designed to collect both air bag availability and deployment for each occupied seat position. Variation in the presentation of the source data on the state crash report forms and the selections coded on the police report may produce unlikely combinations or missing data. For example:

1. If the seat position does not have an air bag at the time of manufacture, but the information on the police report indicates an air bag was available or deployed, the information on the police report takes precedence.
2. If the seat position has an air bag installed at the time of manufacture and the police report indicates there is no air bag available, then the police report information takes precedence.

**SAS Name: AIR_BAG**

**Attribute Codes**

| ***2016*** | ***2017-Later*** | |
|---|---|---|
| 0 | -- | Not Applicable |
| 1 | 1 | Deployed – Front |
| 2 | 2 | Deployed – Side *(Door, Seat Back)* |
| 3 | 3 | Deployed – Curtain *(Roof)* |
| 7 | 7 | Deployed – Other *(Knee, Air Belt, etc.)* |
| 8 | 8 | Deployed – Combination |
| 9 | 9 | Deployment – Unknown Location |
| 20 | 20 | Not Deployed |
| 28 | -- | Switched Off |
| 97 | 97 | Not a Motor Vehicle Occupant |
| 98 | 98 | Not Reported |
| 99 | 99 | Deployment Unknown |

## P13 Ejection

**Definition:** This data element describes the ejection status and the degree of ejection for this person, excluding motorcycle occupants.

**Additional Information:**

**SAS Name:** **EJECTION**

**Attribute Codes**

***2016-Later***

0 Not Ejected
1 Totally Ejected
2 Partially Ejected
3 Ejected – Unknown Degree
7 Not Reported
8 Not Applicable
9 Unknown

## P13I Imputed Ejection

**Definition:** This imputed data element had the same definition and data element values as Ejection, excluding 9 (Unknown) and 7 (Not Reported).

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **EJECT_IM**

## P16/NM15 Police-Reported Alcohol Involvement

**Definition:** This data element records whether alcohol was involved for this person and reflects the judgment of law enforcement.

**Additional Information:** This data element does not indicate that alcohol was a cause of the crash. If a police crash report indicates that opened or unopened alcohol bottles were found in the vehicle, then this information does not by itself constitute involvement.

**SAS Name:** **DRINKING**

**Attribute Codes**

***2016-Later***

0 No *(Alcohol Not Involved)*
1 Yes *(Alcohol Involved)*
8 Not Reported
9 Unknown *(Police Reported)*

## P16/NM15I Imputed Police-Reported Alcohol Involvement

**Definition:** The definition and data element values are the same as Police-Reported Alcohol Involvement, excluding 8 for not reported and 9 for unknown alcohol involvement.

**Additional Information:** See the CRSS Imputation section of this manual.

**SAS Name:** **PERALCH_IM**

## P18/NM17 Alcohol Test

### P18A/NM17A Alcohol Test Status

**Definition:** This data element identifies whether an alcohol test was given to this person.

**Additional Information:**

**SAS Name:** **ALC_STATUS**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | Test Not Given |
| 1 | -- | Test Refused |
| 2 | 2 | Test Given |
| 8 | 8 | Not Reported |
| 9 | 9 | Unknown if Tested |

### P18B/NM17B Alcohol Test Type

**Definition:** This data element identifies the type of alcohol test that was given to this person.

**Additional Information:** If a valid blood test is administered along with another type of test then blood test is coded.

**SAS Name:** **ATST_TYP**

**Attribute Codes**

| *2016-Later* | |
|---|---|
| 0 | Test Not Given |
| 1 | Blood |
| 2 | Breath Test *(AC)* |
| 3 | Urine |
| 8 | Other Test Type |
| 10 | Preliminary Breath Test *(PBT)* |
| 95 | Not Reported |
| 98 | Unknown Test Type |
| 99 | Unknown if Tested |

## P18C/NM17C Alcohol Test Result

**Definition:** This data element identifies the alcohol test result for this person.

**Additional Information:** A BAC of .10 is coded as 100. The decimal is implied. The BAC is expressed in grams per deciliter (g/dL) or a clinical evaluation of the same.

See Appendix D: Analytical Classification of Select CRSS Data Elements for the standard NCSA classifications for this data element.

**SAS Name:** **ALC_RES**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0-939 | Actual Value |
| 940 | 0.94 or Greater |
| 995 | Not Reported |
| 996 | Test Not Given |
| 997 | Test Performed, Results Unknown |
| 998 | Positive Reading With No Actual Value |
| 999 | Unknown if Tested |

## P19/NM18 Police Reported Drug Involvement

**Definition:** This data element records whether drugs were involved for this person and reflects the judgment of law enforcement.

**Additional Information:** Involvement is not an indication that drugs were in any way cause of the crash, even though it may have been. If the police crash report indicates that drugs were found in the vehicle, then this information does not by itself constitute involvement.

**SAS Name: DRUGS**

**Attribute Codes**

***2016-Later***

0 No *(Drugs Not Involved)*
1 Yes *(Drugs Involved)*
8 Not Reported
9 Unknown *(Police Reported)*

## P21/NM20 Drug Test

### P21A/NM20A Drug Test Status

**Definition:** This data element identifies whether a drug test was given to this person.

**Additional Information:**

**SAS Name:** **DSTATUS**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | Test Not Given |
| 1 | -- | Test Refused |
| 2 | 2 | Test Given |
| 8 | 8 | Not Reported |
| 9 | 9 | Unknown if Tested |

### P21B/NM20B Drug Test Type

**Definition:** This data element identifies the type of drug test that was given to this person.

**Additional Information:**

**SAS Name:** **DRUGTST1**, **DRUGTST2**, **DRUGTST3**

**Attribute Codes**

| *2016-Later* | |
|---|---|
| 0 | Test Not Given |
| 1 | Blood |
| 2 | Urine |
| 3 | Both Blood and Urine Tests |
| 6 | Not Reported |
| 7 | Unknown Test Type |
| 8 | Other Test Type |
| 9 | Unknown if Tested |

## P21C/NM20C Drug Test Result

**Definition:** This data element identifies the drug test result for this person.

**SAS Name:** **DRUGRES1, DRUGRES2, DRUGRES3**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Test Not Given |
| 1 | Tested for Drugs, No Drugs Found/Negative |
| 95 | Not Reported |
| 997 | Tested for Drugs, Result Unknown |
| 998 | Tested for Drugs, Drugs Found, Type Unknown/Positive |
| 999 | Unknown if Tested |

## P22/NM21 Transported to First Treatment Facility

**Definition:** This data element identifies the mode of transportation to a hospital or medical facility provided for this person.

**Additional Information:**

**SAS Name: HOSPITAL**

**Attribute Codes**

***2016-Later***

0 Not Transported
1 EMS Air
2 Law Enforcement
3 EMS Unknown Mode
4 Transported Unknown Source
5 EMS Ground
6 Other
8 Not Reported
9 Unknown

## P26/NM25 Related Factors- Person Level

**Definition:** This data element records factors related to motor vehicle occupants other than drivers and persons not in motor vehicles as expressed by the investigating officer.

**Additional Information:** There are also vehicle-level-related factors in the Vehicle data file, VEH_SC1 and VEH_SC2 and driver-related factors, also in the Vehicle data file, namely DR_SF1, DR_SF2, DR_SF3 and DR_SF4. There are also crash-related factors CF1, CF2, and CF3 in the Accident data file.

Any of the three data elements may have been used to code a related factor. One must test all three data elements to insure that the selected related factor is included.

Person-related factors for all drivers are coded 0. Person-related factors for non-drivers can have non-zero values as listed below.

**SAS Name: P_SF1, P_SF2, P_SF3**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | None/Not Applicable-Driver |
| 5 | 5 | Interfering With Driver* |
| 9 | 9 | Construction/Maintenance/Utility Worker/Highway Department, Contractor, Utility Company Personnel, etc. |
| -- | 10 | Alcohol and/or Drug Test Refused |
| 13 | 13 | Motorized Wheelchair Rider** |
| 21 | 21 | Overloading or Improper Loading of Vehicle with Passengers or Cargo |
| 32 | 32 | Opening Vehicle Closure into Moving Traffic or While Vehicle is in Motion* |
| 56 | 56 | Non-Driver Flees Scene |
| 86 | 86 | Emergency Services Personnel |
| 87 | 87 | Police or Law Enforcement Officer |
| 89 | 89 | Parked Motor Vehicle With Equipment Extending into the Travel Lane* |
| 90 | 90 | Non-Motorist Pushing a Vehicle** |
| 91 | 91 | Portable Electronic Devices |
| 92 | 92 | Person in Ambulance Treatment Compartment* |
| 93 | 93 | Non-Motorist Wearing Motorcycle Helmet** |
| 99 | 99 | Unknown |

***** Attribute is only applicable to occupants (other than drivers) of motor vehicles.

** Attribute is only applicable to persons not in motor vehicles.

## NM4 Vehicle Number of Motor Vehicle Striking Non-Motorist

**Definition:** This data element identifies the "Vehicle Number" (VEH_NO) of the in-transport vehicle that made contact with this non-motorist.

**Additional Information:** This data element applies only to non-motorists/non-occupants and reflects the vehicle that made contact with the non-motorist/non-occupant being coded.

The number must match the vehicle number of the striking vehicle. This number is similar to VEH_NO, except that the non-motorist/non-occupant was struck by the vehicle, rather than being within the vehicle.

**SAS Name: STR_VEH**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Occupant of Motor Vehicle |
| 1-998 | Vehicle Number of Striking Vehicle |
| 999 | Unknown |

## NM10 Non-Motorist Location at Time of Crash

**Definition:** This data element identifies the attribute which best describes the location of this non-motorist with respect to the roadway at the time of the crash.

**Additional Information:** Non-motorists who are occupants of motor vehicles not in-transport are coded with respect to the location of the vehicle.

**SAS Name: LOCATION**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Not Applicable-Motor Vehicle Occupant |
| 1 | At Intersection-In Marked Crosswalk |
| 2 | At Intersection-Unmarked/Unknown If Marked Crosswalk |
| 3 | At Intersection-Not in Crosswalk |
| 9 | At Intersection-Unknown Location |
| 10 | Not At Intersection-In Marked Crosswalk |
| 11 | Not At Intersection-On Roadway, Not in Marked Crosswalk Unknown |
| 13 | Not At Intersection-On Roadway, Crosswalk Availability Unknown |
| 14 | Parking Lane/Zone |
| 16 | Bicycle Lane |
| 20 | Shoulder/Roadside |
| 21 | Sidewalk |
| 22 | Median/Crossing Island |
| 23 | Driveway Access |
| 24 | Shared-Use Path |
| 25 | Non-Trafficway Area |
| 28 | Other |
| 98 | Not Reported |
| 99 | Unknown Location |

See Appendix F: Analysis of Pedestrian and Bicycle Crashes Around Intersections for guidance on analyzing Pedestrian/Bicyclist crash locations.

## The PARKWORK Data File

The Parkwork data file includes Vehicle data elements applicable to Parked and Working Vehicles. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, and VEH_NO, which are described in the beginning of the Data Element Definitions and Codes section. The Parkwork data file also contains the data elements on the following pages.

CASENUM and VEH_NO are the unique identifiers for each record. CASENUM should be used to merge the Parkwork data file with the Accident data file. CASENUM and VEH_NO should be used to merge the Parkwork data file with the Vindecode and Person data files.

## C4A Number of Motor Vehicles in Transport (MVIT) Involved

**Definition:** This data element is a count of the number of vehicles in-transport involved in the crash. Legally parked vehicles are not included.

**Additional Information:** See this data element in the Accident data file section for more information.

**SAS Name:** **PVE_FORMS**

**Attribute Codes**

***2016-Later***

1-100 Number of Vehicles

## C8 Crash Date

## C8A Month of Crash

**Definition:** This data element records the month in which the crash occurred.

**Additional Information:** See this data element in the Accident data file section for more information.

**SAS Name: PMONTH**

**Attribute Codes**

***2016-Later***

1 January
2 February
3 March
4 April
5 May
6 June
7 July
8 August
9 September
10 October
11 November
12 December

## C9 Crash Time

## C9A Hour of Crash

**Definition:** This data element records the hour at which the crash occurred.

**Additional Information:** See this data element in the Accident data file section for more information.

**SAS Name:** **PHOUR**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0-23 | Hour |
| 99 | Unknown |

## C9B Minute of Crash

**Definition:** This data element records the minutes after the hour at which the crash occurred.

**Additional Information:** See this data element in the Accident data file section for more information.

**SAS Name:** **PMINUTE**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0-59 | Minute |
| 99 | Unknown |

## C19 First Harmful Event

**Definition:** This data element describes the first injury or damage producing event of the crash.

**Additional Information:** See this data element in the Accident data file section for more information.

**SAS Name:** **PHARM_EV**

**Attribute Codes**

***2016-Later***

*NONCOLLISION*

1 Rollover/Overturn
2 Fire/Explosion
3 Immersion or Partial Immersion
4 Gas Inhalation
5 Fell/Jumped from Vehicle
6 Injured in Vehicle *(Non-Collision)*
7 Other Noncollision
16 Thrown or Falling Object
44 Pavement Surface Irregularity *(Ruts, Potholes, Grates, etc.)*
51 Jackknife *(Harmful to This Vehicle)*
72 Cargo/Equipment Loss or Shift *(Harmful to This Vehicle)*

*COLLISION WITH MOTOR VEHICLE IN TRANSPORT*

12 Motor Vehicle In-Transport
54 Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport
55 Motor Vehicle in Motion Outside the Trafficway

*COLLISION WITH OBJECT NOT FIXED*

8 Pedestrian
9 Pedalcyclist
10 Railway Vehicle
11 Live Animal
14 Parked Motor Vehicle
15 Non-Motorist on Personal Conveyance
18 Other Object Not Fixed
45 Working Motor Vehicle
49 Ridden Animal or Animal Drawn Conveyance
73 Object That Had Fallen From Motor Vehicle In-Transport
74 Road Vehicle on Rails

## C19 First Harmful Event *(continued)*

**Attribute Codes**

***2016-Later***

*COLLISION WITH FIXED OBJECT*

17 Boulder
19 Building
20 Impact Attenuator/Crash Cushion
21 Bridge Pier or Support
23 Bridge Rail *(Includes Parapet)*
24 Guardrail Face
25 Concrete Traffic Barrier
26 Other Traffic Barrier
30 Utility Pole/Light Support
31 Post, Pole or Other Support
32 Culvert
33 Curb
34 Ditch
35 Embankment
38 Fence
39 Wall
40 Fire Hydrant
41 Shrubbery
42 Tree *(Standing Only)*
43 Other Fixed Object
46 Traffic Signal Support
48 Snow Bank
50 Bridge Overhead Structure
52 Guardrail End
53 Mail Box
57 Cable Barrier
58 Ground
59 Traffic Sign Support

*NOT REPORTED AND UNKNOWN*

99 Unknown

## C20 Manner of Collision

**Definition:** This data element describes the orientation of two motor vehicles in-transport when they are involved in the "First Harmful Event" of a collision crash. If the "First Harmful Event" is not a collision between two motor vehicles in-transport it is classified as such.

**Additional Information:** See this data element in the Accident data file section for more information.

**SAS Name:** **PMAN_COLL**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Not Collision with Motor Vehicle in Transport |
| 1 | Front-to-Rear |
| 2 | Front-to-Front |
| 6 | Angle |
| 7 | Sideswipe, Same Direction |
| 8 | Sideswipe, Opposite Direction |
| 9 | Rear-to-Side |
| 10 | Rear-to-Rear |
| 11 | Other |
| 98 | Not Reported |
| 99 | Unknown |

## V4 Number of Occupants

**Definition:** This data element is a count of the number of occupants in this vehicle.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PNUMOCCS**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | None |
| 1-98 | Number of Occupants |
| 99 | Unknown |

## V5 Unit Type

**Definition:** This data element identifies the type of unit that applies to this motor vehicle at the time it became an involved vehicle in the crash and was reported as a unit on the police crash report.

**Additional Information:** This data element also appears in the Vehicle data file as UNITTYPE. The only valid attribute for UNITTYPE is 1 (Motor Vehicle in Transport *(Inside or Outside the Trafficway)*).

**SAS Name: PTYPE**

**Attribute Codes**

***2016-Later***

2 Motor Vehicle Not in Transport Within the Trafficway
3 Motor Vehicle Not in Transport Outside the Trafficway
4 Working Motor Vehicle *(Highway Construction, Maintenance, Utility Only)*

## V6 Hit and Run

**Definition:** This data element identifies whether this vehicle was a contact vehicle in the crash that did not stop to render aid (this can include drivers who flee the scene on foot). Hit and run is coded when a motor vehicle in-transport, or its driver, departs from the scene; vehicles not in-transport are excluded. It does not matter whether the hit-and-run vehicle was striking or struck.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PHIT_RUN**

**Attribute Codes**

***2016-Later***

0 No
1 Yes
9 Unknown

## V9 Vehicle Make

**Definition:** This data element identifies the make (manufacturer) of this vehicle.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PMAKE**

**Attribute Codes**

***2016-Later***

1 American Motors
2 Jeep/Kaiser-Jeep/Willys-Jeep
3 AM General
6 Chrysler
7 Dodge
8 Imperial
9 Plymouth
10 Eagle
12 Ford
13 Lincoln
14 Mercury
18 Buick/Opel
19 Cadillac
20 Chevrolet
21 Oldsmobile
22 Pontiac
23 GMC
24 Saturn
25 Grumman
26 Coda
29 Other Domestic Manufacturers
*Avanti*
*Checker*
*DeSoto*
*Excalibur*
*Hudson*
*Packard*
*Panoz*
*Saleen*
*Studebaker*
*Stutz*
*Tesla*
30 Volkswagen
31 Alfa Romeo
32 Audi
33 Austin/Austin Healey
34 BMW
35 Datsun/Nissan
36 Fiat
37 Honda

## V9 Vehicle Make *(continued)*

**Attribute Codes**

***2016-Later***

38 Isuzu
39 Jaguar
40 Lancia
41 Mazda
42 Mercedes-Benz
43 MG
44 Peugeot
45 Porsche
46 Renault
47 Saab
48 Subaru
49 Toyota
50 Triumph
51 Volvo
52 Mitsubishi
53 Suzuki
54 Acura
55 Hyundai
56 Merkur
57 Yugo
58 Infiniti
59 Lexus
60 Diahatsu
61 Sterling
62 Land Rover
63 Kia
64 Daewoo
65 Smart
67 Scion
69 Other Import

*Aston Martin*
*Bentley*
*Bertone*
*Bricklin*
*Bugatti*
*Caterham*
*Citroen*
*DeLorean*
*Desta*
*Ferrari*
*Fisker*
*Gazelle*
*Hillman*
*Jensen*

## V9 Vehicle Make *(continued)*

**Attribute Codes**

***2016-Later***

69 Other Import *(continued)*
- *Koenigsegg*
- *Lada*
- *Lamborghini*
- *Lotus*
- *Mahindra*
- *Maserati*
- *Maybach*
- *McLaren*
- *Mini Cooper*
- *Morgan*
- *Morris*
- *Reliant (British)*
- *Rolls-Royce*
- *Simca*
- *Singer*
- *Spyker*
- *Sunbeam*
- *TVR*

70 BSA
71 Ducati
72 Harley-Davidson
73 Kawasaki
74 Moto-Guzzi
75 Norton
76 Yamaha
78 Other Make Moped
79 Other Make Motored Cycle
80 Brockway
81 Diamond Reo/Reo
82 Freightliner/White
83 FWD
84 International Harvester/Navistar
85 Kenworth
86 Mack
87 Peterbilt
88 Iveco/Magirus
89 White/Autocar, White/GMC
90 Bluebird
91 Eagle Coach
92 Gillig
93 MCI
94 Thomas Built

## V9 Vehicle Make *(continued)*

**Attribute Codes**

***2016-Later***

97 Not Reported
98 Other Make
*Auto-Union-DKW*
*Carpenter*
*Collins Bus*
*DINA*
*Divco*
*Hino*
*Meyers Motors*
*Mid Bus*
*Neoplan*
*Orion*
*Oshkosh*
*Scania*
*Sterling*
*Think*
*UD*
*Van Hool*
*Western Star*
99 Unknown Make

## V10 Vehicle Model

**Definition:** This data element identifies the model of this vehicle within a given make.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PMODEL**

**Attribute Codes**

***2016-Later***

See the current FARS/CRSS Coding and Validation Manual for vehicle model codes.

## V11 Body Type

**Definition:** This data element identifies a classification of this vehicle based on its general body configuration, size, shape, doors, etc.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PBODYTYP**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| *AUTOMOBILES* | | |
| 1 | 1 | Convertible *(Excludes Sun-Roof, T-Bar)* |
| 2 | 2 | 2-Door Sedan, Hardtop, Coupe |
| 3 | 3 | 3-Door/2-Door Hatchback |
| 4 | 4 | 4-Door Sedan, Hardtop |
| 5 | 5 | 5-Door/4-Door Hatchback |
| 6 | 6 | Station Wagon *(Excluding Van And Truck Based)* |
| 7 | 7 | Hatchback, Number Of Doors Unknown |
| 8 | 8 | Sedan/Hardtop, Number of Doors Unknown |
| 9 | 9 | Other or Unknown Automobile Type |
| 17 | 17 | 3-Door Coupe |
| *AUTOMOBILE DERIVATIVES* | | |
| 10 | 10 | Auto Based Pickup *(Includes El Camino, Caballero, Ranchero, SSR, G8-ST, Baha, Brat, And Rabbit Pickup)* |
| 11 | 11 | Auto Based Panel *(Cargo Station Wagon, Auto-Based Ambulance/Hearse)* |
| 12 | 12 | Large Limousine *(More Than Four Side Doors Or Stretched Chassis)* |
| 13 | 13 | Three Wheel Automobile Or Automobile Derivative |
| *UTILITY VEHICLES* | | |
| 14 | 14 | Compact Utility *(ANSI D-16 Utility Vehicle Categories "Small" and "Midsize")* |
| 15 | 15 | Large Utility *(ANSI D-16 Utility Vehicle Categories "Full Size" and "Large")* |
| 16 | 16 | Utility Station Wagon |
| 19 | 19 | Utility Vehicle, Unknown Body Type |
| *VAN-BASED LIGHT TRUCKS (GVWR ≤ 10,000 LBS)* | | |
| 20 | 20 | Minivan |
| 21 | 21 | Large Van – Includes Van-Based Buses |
| 22 | 22 | Step Van Or Walk-In Van *(GVWR ≤ 10,000 lbs)* |
| 28 | 28 | Other Van Type |
| 29 | 29 | Unknown Van Type |
| *LIGHT CONVENTIONAL TRUCKS (PICKUP STYLE CAB, GVWR ≤10,000 LBS)* | | |
| 30 | -- | Compact Pickup *(S-10, LUV, Ram 50, Rampage, Courier, Ranger, S-5, Pup, Mazda Pickup, Mitsubishi Truck, Datsun/Nissan Pickup, Arrow Pickup, Scamp, Toyota Pickup, VW Pickup, D50, Colt P/U, T-10, S-15, T-15, Ram 100, Dakota, Sonoma)* |
| 31 | -- | Standard *Pickup (C10-C35, Jeep P/U, Comanche, Ram P/U, K10-K35, D100-D350, W100-350, F100-F350, R100-500, R10-R35, V10-35, Silverado, Sierra, T100)* |
| 32 | 32 | Pickup With Slide-In Camper |

## V11 Body Type *(continued)*

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 33 | 33 | Convertible Pickup |
| -- | 34 | Light Pickup |
| 39 | 39 | Unknown *(Pickup Style)* Light Conventional Truck |
| *OTHER LIGHT TRUCKS (GVWR ≤10,000 LBS)* | | |
| 40 | 40 | Cab Chassis Based *(Included Rescue Vehicle, Light Stake, Dump, And Tow Truck)* |
| 41 | 41 | Truck Based Panel |
| 45 | 45 | Other Light Conventional Truck Type |
| 48 | 48 | Unknown Light Truck Type |
| 49 | 49 | Unknown Light Vehicle Type *(Automobile, Utility, Van, Or Light Truck)* |
| *BUSES (EXCLUDES VAN BASED BUSES WITH A GVWR ≤ 10,000 LBS.)* | | |
| 50 | 50 | School Bus *(Designed To Carry Students, Not Cross Country Or Transit)* |
| 51 | 51 | Cross Country/Intercity Bus *(i.e., Greyhound)* |
| 52 | 52 | Transit Bus *(City Bus)* |
| 55 | 55 | Van-Based Bus GVWR > 10,000 lbs. |
| 58 | 58 | Other Bus Type |
| 59 | 59 | Unknown Bus Type |
| *MEDIUM/HEAVY TRUCKS (GVWR > 10,000 LBS)* | | |
| 60 | 60 | Step Van |
| 61 | 61 | Single-Unit Straight Truck or Cab-Chassis *(10,000 lbs<GVWR< or =19,500 lbs)* |
| 62 | 62 | Single-Unit Straight Truck or Cab-Chassis *(19,500 lbs<GVWR< or =26,000 lbs)* |
| 63 | 63 | Single-Unit Straight Truck or Cab-Chassis *(GVWR>26,000 lbs)* |
| 64 | 64 | Single Unit Straight Truck or Cab-Chassis *(GVWR unknown)* |
| 66 | 66 | Truck-Tractor *(Cab Only, Or With Any Number Of Trailing Units; Any Weight)* |
| 67 | 67 | Medium/Heavy Pickup *(GVWR > 10,000 lbs)* |
| 71 | 71 | Unknown if Single-Unit or Combination-Unit Medium Truck *(10,000 lbs < GVWR < 26,000 lbs)* |
| 72 | 72 | Unknown if Single-Unit or Combination-Unit Heavy Truck *(GVWR>26,000 lbs)* |
| 78 | 78 | Unknown Medium/Heavy Truck Type |
| 79 | 79 | Unknown Truck Type *(Light/Medium/Heavy)* |
| *MOTOR HOMES* | | |
| 42 | 42 | Light Truck Based Motor Home *(Chassis Mounted)* |
| 65 | 65 | Medium/Heavy Truck-Based Motor Home |
| 73 | 73 | Camper or Motor Home, Unknown Truck Type |
| *MOTORED CYCLES, MOPEDS, ALL-TERRAIN VEHICLES, ALL-TERRAIN CYCLES* | | |
| 80 | -- | Motorcycle |
| -- | 80 | Two Wheel Motorcycle *(excluding motor scooters)* |
| 81 | -- | Moped *(Motorized Bicycle)* |
| -- | 81 | Moped or Motorized Bicycle |

## V11 Body Type *(continued)*

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 82 | -- | Three Wheeled Motorcycle Or Moped |
| -- | 82 | Three-wheel Motorcycle *(2 Rear Wheels)* |
| 83 | -- | Off-Road Motorcycle *(2-Wheel)* |
| -- | 83 | Off-Road Motorcycle |
| -- | 84 | Motor Scooter |
| -- | 85 | Unenclosed Three Wheel Motorcycle / Unenclosed Autocycle *(1 Rear Wheel)* |
| -- | 86 | Enclosed Three Wheel Motorcycle / Enclosed Autocycle *(1 Rear Wheel)* |
| -- | 87 | Unknown Three Wheel Motorcycle Type |
| 88 | -- | Other Motored Cycle Type *(Minibike, Motor Scooter, Pocket Motorcycles, Pocket Bikes)* |
| -- | 88 | Other Motored Cycle Type *(Mini-bikes, Pocket Motorcycles, "Pocket Bikes")* |
| 89 | 89 | Unknown Motored Cycle Type |
| 90 | 90 | ATV *(All-Terrain Vehicle)* / ATC *(All-Terrain Cycle)* |
| *OTHER VEHICLES* | | |
| 91 | 91 | Snowmobile |
| 92 | 92 | Farm Equipment Other Than Trucks |
| 93 | 93 | Construction Equipment Other Than Trucks *(Includes Graders)* |
| 94 | 94 | Low Speed Vehicle *(LSV)*/Neighborhood Electric Vehicle *(NEV)* |
| 95 | 95 | Golf Cart |
| -- | 96 | Recreational Off-Highway Vehicle *(ROV)* |
| 97 | 97 | Other Vehicle Type *(Includes Go-Cart, Fork-Lift, City Street Sweeper)* |
| 98 | 98 | Not Reported |
| 99 | 99 | Unknown Body Type |

## V12 Vehicle Model Year

**Definition:** This data element identifies the manufacturer's model year of this vehicle.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name:** **PMODYEAR**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| xxxx | Actual Model Year |
| 9998 | Not Reported |
| 9999 | Unknown |

## V13 Vehicle Identification Number (VIN)

**Definition:** This data element records the vehicle identification number (VIN) of this vehicle assigned by the vehicle manufacturer. The VIN contains information on the vehicle such as: manufacturer, model year, model, body type, restraint type, etc.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PVIN**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 000000000000 | No VIN Required |
| xxxxxxxxxxx | First 12 Characters of the VIN |
| 888888888888 | Not Reported |
| 999999999999 | Unknown |

## V14 Vehicle Trailing

**Definition:** This data element identifies whether this vehicle had any attached trailing units or was towing another motor vehicle. A trailing unit can be a horse trailer, fifth wheel trailer, camper, boat, truck trailer, towed vehicle or any other trailer.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PTRAILER**

**Attribute Codes**

***2016-Later***

0 No Trailing Units
1 Yes, One Trailing Unit
2 Yes, Two Trailing Units
3 Yes, Three or More Trailing Units
4 Yes, Number of Trailing Units Unknown
5 Vehicle Towing Another Motor Vehicle – Fixed Linkage
6 Vehicle Towing Another Motor Vehicle – Non-fixed Linkage
9 Unknown

## V15 Trailer Vehicle Identification Number

**Definition:** This data element records the vehicle identification number (VIN) of any trailing units of a combination vehicle.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PTRLR1VIN, PTRLR2VIN, PTRLR3VIN**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 000000000000 | No VIN Required |
| xxxxxxxxxxxx | First 12 Characters of the VIN |
| 777777777777 | No Trailing Units |
| 888888888888 | Not Reported |
| 999999999999 | Unknown |

## V17 Motor Carrier Identification Number (MCID)

**Definition:** This data element records the issuing authority and motor carrier identification number if applicable to this vehicle.

**Additional Information:** This 11-character data element is the combination of two data elements, the 2-digit Motor Carrier Issuing Authority code (MCARR_I1) followed by the 9-character Identification Number (MCARR_I2).

See this data element in the Vehicle data file section for more information.

**SAS Name:** **PMCARR_ID**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| xxxxxxxxxxx | 11-Character Combination of MCARR_I1 followed by MCARR_I2 |
| 00000000000 | Not Applicable |
| 77777777777 | Not Reported |
| 88888888888 | None |
| 99999999999 | Unknown |

## V17A MCID Issuing Authority

**Definition:** This data element records the issuing authority if applicable to this vehicle.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PMCARR_I1**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Not Applicable |
| 1-56 | CRSS State Code |
| 57 | US DOT |
| 58 | MC/MX *(ICC)* |
| 77 | Not Reported |
| 88 | None |
| 95 | Canada |
| 96 | Mexico |
| 99 | Unknown |

## V17B MCID Identification Number

**Definition:** This data element records the motor carrier identification number if applicable to this vehicle.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PMCARR_I2**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| xxxxxxxxx | Actual 9-Digit Number |
| 000000000 | Not Applicable |
| 777777777 | Not Reported |
| 888888888 | None |
| 999999999 | Unknown |

## V18 Gross Vehicle Weight Rating

**Definition:** This data element identifies the gross vehicle weight rating of this vehicle if applicable.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PGVWR**

**Attribute Codes**

***2016-Later***

0 Not Applicable
1 10,000 lbs or Less
2 10,001 lbs - 26,000 lbs
3 26,001 lbs or More
8 Not Reported
9 Unknown

## V19 Vehicle Configuration

**Definition:** This data element describes the general configuration of this vehicle if applicable.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PV_CONFIG**

**Attribute Codes**

***2016-Later***

0 Not Applicable
1 Single-Unit Truck *(2 axles and GVWR more than 10,000 lbs.)*
2 Single-Unit Truck *(3 or More axles)*
4 Truck Pulling Trailer(s)
5 Truck Tractor *(Bobtail, i.e., Tractor Only, No Trailer)*
6 Truck Tractor/Semi-Trailer
7 Truck Tractor/Double
8 Truck Tractor/Triple
10 Vehicle 10,000 lbs or Less Placarded for Hazardous Materials
19 Truck More than 10,000 lbs, Cannot Classify
20 Bus/Large Van *(Seats for 9-15 Occupants, Including Driver)*
21 Bus *(Seats for More Than 15 Occupants, Including Driver)*
99 Unknown

## V20 Cargo Body Type

**Definition:** This data element identifies the primary cargo carrying capability of this vehicle if applicable.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PCARGTYP**

**Attribute Codes**

***2016-Later***

0 Not Applicable
1 Van/Enclosed Box
2 Cargo Tank
3 Flatbed
4 Dump
5 Concrete Mixer
6 Auto Transporter
7 Garbage/Refuse
8 Grain/Chips/Gravel
9 Pole-Trailer
10 Log
11 Intermodal Container Chassis
12 Vehicle Towing Another Vehicle
22 Bus
96 No Cargo Body
97 Other
98 Unknown Cargo Body Type
99 Unknown

## V21A/HM1 Hazardous Materials Involvement

**Definition:** This data element identifies whether this vehicle was carrying hazardous materials.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name:** PHAZ_INV

**Attribute Codes**

***2016-Later***

1 No
2 Yes

## V21B/HM2 Hazardous Materials Placard

**Definition:** This data element identifies the presence of hazardous materials for this vehicle and whether this vehicle displayed a hazardous materials placard.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name:** PHAZPLAC

**Attribute Codes**

***2016-Later***

0 Not Applicable
1 No
2 Yes
8 Not Reported

## V21C/HM3 Hazardous Material Identification Number

**Definition:** This data element identifies the 4-digit hazardous material identification number for this vehicle.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name:** PHAZ_ID

**Attribute Codes**

***2016-Later***

0 Not Applicable
xxxx Actual 4-Digit Number
8888 Not Reported

## V21D/HM4 Hazardous Material Class Number

**Definition:** This data element identifies the single-digit hazardous material class number for this vehicle.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PHAZ_CNO**

**Attribute Codes**

***2016-Later***

0 Not Applicable
1 Explosives
2 Gases
3 Flammable / Combustible Liquid
4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet
5 Oxidizer and Organic Peroxide
6 Poison and Poison Inhalation Hazard
7 Radioactive
8 Corrosive
9 Miscellaneous
88 Not Reported

## V21E/HM5 Release of Hazardous Material from the Cargo Compartment

**Definition:** This data element identifies whether any hazardous cargo was released from the cargo tank or compartment of this vehicle.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PHAZ_REL**

**Attribute Codes**

***2016-Later***

0 Not Applicable
1 No
2 Yes
8 Not Reported

## V22 Bus Use

**Definition:** This data element describes the common type of bus service this vehicle was being used as at the time of the crash or the primary use for the bus if not in service at the time of the crash.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PBUS_USE**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Not a Bus |
| 1 | School |
| 4 | Intercity |
| 5 | Charter/Tour |
| 6 | Transit/Commuter |
| 7 | Shuttle |
| 8 | Modified for Personal/Private Use |
| 98 | Not Reported |
| 99 | Unknown |

## V23 Special Use

**Definition:** This data element identifies any special use associated with this vehicle at the time of the crash.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PSP_USE**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | No Special Use |
| 1 | Taxi |
| 2 | Vehicle Used for School Transport |
| 3 | Vehicle Used as Other Bus |
| 4 | Military |
| 5 | Police |
| 6 | Ambulance |
| 7 | Fire Truck |
| 8 | Non-Transport Emergency Services Vehicle |
| 13 | Incident Response |
| 98 | Not Reported |
| 99 | Unknown |

## V24 Emergency Use

**Definition:** This data element identifies whether this vehicle was engaged in emergency use. Emergency Use indicates operation of any motor vehicle that is legally authorized by a government authority to respond to emergencies with or without the use of emergency warning equipment, such as a police vehicle, fire truck or ambulance while actually engaged in such response.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PEM_USE**

**Attribute Codes**

***2016-Later***

0 Not Applicable
2 Non-Emergency, Non-Transport
3 Non-Emergency Transport
4 Emergency Operation, Emergency Warning Equipment Not In Use
5 Emergency Operation, Emergency Warning Equipment In Use
6 Emergency Operation, Emergency Warning Equipment in Use Unknown
8 Not Reported
9 Unknown

## V29A Initial Contact Point

**Definition:** This data element identifies the area on this vehicle that produced the first instance of injury to non-motorists or occupants of this vehicle, or that resulted in the first instance of damage to other property or to this vehicle.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name:** **PIMPACT1**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | Non-Collision |
| 1-12 | 1-12 | Clock points |
| 13 | 13 | Top |
| 14 | 14 | Undercarriage |
| 18 | 18 | Cargo/Vehicle Parts Set-In-Motion |
| 19 | 19 | Other Objects Set-In-Motion |
| -- | 20 | Object Set in Motion, Unknown if Cargo/Vehicle Parts or Other |
| 61 | 61 | Left |
| 62 | 62 | Left-Front Side |
| 63 | 63 | Left-Back Side |
| 81 | 81 | Right |
| 82 | 82 | Right-Front Side |
| 83 | 83 | Right-Back Side |
| 98 | 98 | Not Reported |
| 99 | 99 | Unknown |

## V30 Extent of Damage

**Definition:** This data element records the amount of damage sustained by this vehicle as indicated on the police crash report based on an operational damage scale.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PVEH_SEV**

**Attribute Codes**

***2016-Later***

0 No Damage
2 Minor Damage
4 Functional Damage
6 Disabling Damage
8 Not Reported
9 Unknown

## V31 Vehicle Removal

**Definition:** This data element describes the mode by which this vehicle left the scene of the crash.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PTOWED**

**Attribute Codes**

***2016-Later***

2 Towed Due to Disabling Damage
3 Towed Not Due to Disabling Damage
5 Not Towed
8 Not Reported
9 Unknown

## V33 Most Harmful Event

**Definition:** This data element describes the event that resulted in the most severe injury or, if no injury, the greatest property damage involving this vehicle.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PM_HARM**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| *NONCOLLISION* | | |
| 1 | 1 | Rollover/Overturn |
| 2 | 2 | Fire/Explosion |
| 3 | 3 | Immersion or Partial Immersion |
| 4 | 4 | Gas Inhalation |
| 5 | 5 | Fell/Jumped from Vehicle |
| 6 | 6 | Injured in Vehicle *(Non-Collision)* |
| 7 | 7 | Other Noncollision |
| 16 | 16 | Thrown or Falling Object |
| 44 | 44 | Pavement Surface Irregularity *(Ruts, Potholes, Grates, etc.)* |
| 51 | 51 | Jackknife *(Harmful to This Vehicle)* |
| 72 | 72 | Cargo/Equipment Loss or Shift *(Harmful to This Vehicle)* |
| *COLLISION WITH MOTOR VEHICLE IN TRANSPORT* | | |
| 12 | 12 | Motor Vehicle In-Transport |
| 54 | 54 | Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport |
| 55 | 55 | Motor Vehicle in Motion Outside the Trafficway |
| *COLLISION WITH OBJECT NOT FIXED* | | |
| 8 | 8 | Pedestrian |
| 9 | 9 | Pedalcyclist |
| 10 | 10 | Railway Vehicle |
| 11 | 11 | Live Animal |
| 14 | 14 | Parked Motor Vehicle |
| 15 | 15 | Non-Motorist on Personal Conveyance |
| 18 | 18 | Other Object Not Fixed |
| 45 | 45 | Working Motor Vehicle |
| 49 | 49 | Ridden Animal or Animal Drawn Conveyance |
| 73 | 73 | Object That Had Fallen From Motor Vehicle In-Transport |
| 74 | 74 | Road Vehicle on Rails |
| -- | 91 | Unknown Object Not Fixed |

## V33 Most Harmful Event*(continued)*

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| | | *COLLISION WITH FIXED OBJECT* |
| 17 | 17 | Boulder |
| 19 | 19 | Building |
| 20 | 20 | Impact Attenuator/Crash Cushion |
| 21 | 21 | Bridge Pier or Support |
| 23 | 23 | Bridge Rail *(Includes Parapet)* |
| 24 | 24 | Guardrail Face |
| 25 | 25 | Concrete Traffic Barrier |
| 26 | 26 | Other Traffic Barrier |
| 30 | 30 | Utility Pole/Light Support |
| 31 | 31 | Post, Pole or Other Support |
| 32 | 32 | Culvert |
| 33 | 33 | Curb |
| 34 | 34 | Ditch |
| 35 | 35 | Embankment |
| 38 | 38 | Fence |
| 39 | 39 | Wall |
| 40 | 40 | Fire Hydrant |
| 41 | 41 | Shrubbery |
| 42 | 42 | Tree *(Standing Only)* |
| 43 | 43 | Other Fixed Object |
| 46 | 46 | Traffic Signal Support |
| 48 | 48 | Snow Bank |
| 50 | 50 | Bridge Overhead Structure |
| 52 | 52 | Guardrail End |
| 53 | 53 | Mail Box |
| 57 | 57 | Cable Barrier |
| 58 | 58 | Ground |
| 59 | 59 | Traffic Sign Support |
| -- | 93 | Unknown Fixed Object |
| 99 | 99 | Unknown |

## V34 Related Factors- Vehicle Level

**Definition:** This data element records factors related to this vehicle expressed by the investigating officer.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PVEH_SC1, PVEH_SC2**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | None |
| 30 | Multi-Wheeled Motorcycle Conversion |
| 33 | Vehicle Being Pushed by Non-Motorist |
| 35 | Reconstructed/Altered Vehicle |
| 39 | Highway Construction, Maintenance or Utility Vehicle, In Transport *(Inside or Outside Work Zone)* |
| 40 | Highway Incident Response Vehicle |
| 41 | Police Fire or EMS Vehicle Working at the Scene of an Emergency or Performing Other Traffic Control Activities |
| 42 | Other Working Vehicle *(Not Construction, Maintenance, Utility, Police, Fire, or EMS Vehicle)* |
| 44 | Adaptive Equipment |
| 99 | Unknown |

## V35 Fire Occurrence

**Definition:** This data element identifies whether a fire in any way related to the crash occurred in this vehicle.

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name: PFIRE**

**Attribute Codes**

***2016-Later***

0 No or Not Reported
1 Yes

## V100 Make Model Combined

**Definition:** This derived data element represents the 5-digit combination of two data elements, the 2-digit "Vehicle Make" code (MAKE) followed by the 3-digit "Vehicle Model" code (MODEL).

**Additional Information:** See this data element in the Vehicle data file section for more information.

**SAS Name:** **PMAK_MOD**

**Attribute Codes**

***2016-Later***

See the current FARS/CRSS Coding and Validation Manual for vehicle make and model codes.

## The PBTYPE Data File

The Pbtype data file includes data on pedestrians, bicyclists, and people on personal conveyances. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, VEH_NO and PER_NO, which are described in the beginning of the Data Element Definitions and Codes section. The Pbtype data file also contains the data elements on the following pages.

CASENUM, VEH_NO and PER_NO are the unique identifiers. CASENUM should be used to merge the Pbtype data file with the Accident data file.

## P5/NM5 Age

**Definition:** This data element identifies the person's age, in years, with respect to the person's last birthday.

**Additional Information:**

**SAS Name: PBAGE**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Less than One Year |
| 1-120 | Age of the Individual in Years |
| 998 | Not Reported |
| 999 | Unknown |

## P6/NM6 Sex

**Definition:** This data element identifies the sex of the person involved in the crash

**Additional Information:**

**SAS Name: PBSEX**

**Attribute Codes**

***2016-Later***

1 Male
2 Female
8 Not Reported
9 Unknown

## P7/NM7 Person Type

**Definition:** This data element describes the role of this person involved in the crash.

**Additional Information:**

**SAS Name: PBPTYPE**

**Attribute Codes**

***2016-Later***

5 Pedestrian
6 Bicyclist
7 Other Cyclist
8 Person on Personal Conveyances

## NM9-PB27 Marked Crosswalk Present

**Definition:** This data element indicates if a marked crosswalk was present at the crash site.

**Additional Information:** This data element is applicable to both pedestrians and bicyclists.

**SAS Name:** PBCWALK

**Attribute Codes**

***2016-Later***

0 None Noted
1 Yes
9 Unknown

## NM9-PB28 Sidewalk Present

**Definition:** This data element indicates if a sidewalk was present at the crash site.

**Additional Information:** This data element is applicable to both pedestrians and bicyclists.

**SAS Name:** PBSWALK

**Attribute Codes**

***2016-Later***

0 None Noted
1 Yes
9 Unknown

## NM9-PB29 School Zone

**Definition:** This data element indicates if the crash occurred in a school zone.

**Additional Information:** This data element is applicable to both pedestrians and bicyclists.

**SAS Name:** PBSZONE

**Attribute Codes**

***2016-Later***

0 None Noted
1 Yes
9 Unknown

## NM9-PB30 Crash Type – Pedestrian

**Definition:** This data element summarizes the circumstances of the crash for this pedestrian.

**Additional Information:** This data element is applicable to pedestrians only.

**SAS Name: PEDCTYPE**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | Not a Pedestrian |
| 120 | 120 | Dispute-Related |
| 130 | 130 | Pedestrian on Vehicle |
| 140 | 140 | Vehicle-Vehicle/Object |
| 150 | 150 | Motor Vehicle Loss of Control |
| 160 | 160 | Pedestrian Loss of Control |
| 190 | 190 | Other Unusual Circumstances |
| 211 | 211 | Backing Vehicle – Non-Trafficway – Driveway |
| 212 | 212 | Backing Vehicle – Driveway Access |
| 213 | 213 | Backing Vehicle – Trafficway |
| 214 | 214 | Backing Vehicle – Non-Trafficway – Parking Lot |
| 219 | 219 | Backing Vehicle – Other/Unknown |
| 220 | 220 | Driverless Vehicle |
| 230 | 230 | Disabled Vehicle-Related |
| 240 | 240 | Emergency Vehicle-Related |
| 250 | 250 | Play Vehicle-Related |
| 311 | 311 | Working in Roadway |
| 312 | 312 | Playing in Roadway |
| 313 | 313 | Lying in Roadway |
| 320 | 320 | Entering/Exiting Parked or Stopped Vehicle |
| 330 | 330 | Mailbox-Related |
| 341 | -- | Transit Bus-Related |
| -- | 341 | Transit Bus Stop-Related |
| 342 | 342 | School Bus Stop-Related |
| 360 | 360 | Ice Cream/Vendor Truck-Related |
| 410 | 410 | Walking/Running Along Roadway With Traffic – From Behind |
| 420 | 420 | Walking/Running Along Roadway With Traffic – From Front |
| 430 | 430 | Walking/Running Along Roadway Against Traffic – From Behind |
| 440 | 440 | Walking/Running Along Roadway Against Traffic – From Front |
| 459 | 459 | Walking/Running Along Roadway – Direction/Position Unknown |
| 461 | 461 | Motorist Entering Driveway |
| 465 | 465 | Motorist Exiting Driveway |
| 469 | 469 | Driveway Access – Other/Unknown |
| 510 | 510 | Waiting to Cross – Vehicle Turning |
| 520 | 520 | Waiting to Cross – Vehicle Not Turning |
| 590 | 590 | Waiting to Cross – Vehicle Action Unknown |
| 610 | 610 | Standing in Roadway |
| 620 | 620 | Walking in Roadway |
| 680 | 680 | Not At Intersection – Other/Unknown |
| 690 | 690 | At Intersection – Other/Unknown |

## NM9-PB30 Crash Type – Pedestrian *(continued)*

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 710 | 710 | Multiple Threat |
| 730 | 730 | Trapped |
| 741 | 741 | Dash |
| 742 | 742 | Dart-Out |
| 760 | 760 | Pedestrian Failed to Yield |
| 770 | 770 | Motorist Failed to Yield |
| 781 | 781 | Motorist Left Turn – Parallel Paths |
| 782 | 782 | Motorist Left Turn – Perpendicular Paths |
| 791 | 791 | Motorist Right Turn – Parallel Paths |
| 792 | 792 | Motorist Right Turn on Red – Parallel Paths |
| 794 | 794 | Motorist Right Turn on Red – Perpendicular Paths |
| 795 | 795 | Motorist Right Turn – Perpendicular Paths |
| 799 | 799 | Motorist Turn/Merge – Other/Unknown |
| 830 | 830 | Non-Trafficway – Parking Lot |
| 890 | 890 | Non-Trafficway – Other/Unknown |
| 900 | 900 | Other – Unknown Location |
| 910 | 910 | Crossing an Expressway |

## NM9-PB30B Crash Type – Bicycle

**Definition:** This data element summarizes the circumstances of the crash for this bicyclist.

**Additional Information:** This data element is applicable to bicyclists only.

**SAS Name:** **BIKECTYPE**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Not a Cyclist |
| 111 | Motorist Turning Error – Left Turn |
| 112 | Motorist Turning Error – Right Turn |
| 113 | Motorist Turning Error – Other |
| 114 | Bicyclist Turning Error – Left Turn |
| 115 | Bicyclist Turning Error – Right Turn |
| 116 | Bicyclist Turning Error – Other |
| 121 | Bicyclist Lost Control – Mechanical Problems |
| 122 | Bicyclist Lost Control – Oversteering, Improper Braking, Speed |
| 123 | Bicyclist Lost Control – Alcohol/Drug Impairment |
| 124 | Bicyclist Lost Control – Surface Conditions |
| 129 | Bicyclist Lost Control – Other/Unknown |
| 131 | Motorist Lost Control – Mechanical Problems |
| 132 | Motorist Lost Control – Oversteering, Improper Braking, Speed |
| 133 | Motorist Lost Control – Alcohol/Drug Impairment |
| 134 | Motorist Lost Control – Surface Conditions |
| 139 | Motorist Lost Control – Other/Unknown |
| 141 | Motorist Drive-Out – Sign-Controlled Intersection |
| 142 | Bicyclist Ride-Out – Sign-Controlled Intersection |
| 143 | Motorist Drive-Through – Sign-Controlled Intersection |
| 144 | Bicyclist Ride-Through – Sign-Controlled Intersection |
| 147 | Multiple Threat – Sign-Controlled Intersection |
| 148 | Sign-Controlled Intersection – Other/Unknown |
| 151 | Motorist Drive-Out – Right Turn on Red |
| 152 | Motorist Drive-Out – Signalized Intersection |
| 153 | Bicyclist – Ride-Out – Signalized Intersection |
| 154 | Motorist Drive-Through – Signalized Intersection |
| 155 | Bicyclist Ride-Through – Signalized Intersection |
| 156 | Bicyclist Failed to Clear – Trapped |
| 157 | Bicyclist Failed to Clear – Multiple Threat |
| 158 | Signalized Intersection – Other/Unknown |
| 159 | Bicyclist Failed to Clear – Unknown |
| 160 | Crossing Paths – Uncontrolled Intersection |
| 180 | Crossing Paths – Intersection – Other/Unknown |
| 211 | Motorist Left Turn – Same Direction |
| 212 | Motorist Left Turn – Opposite Direction |
| 213 | Motorist Right Turn – Same Direction |
| 214 | Motorist Right Turn – Opposite Direction |
| 215 | Motorist Drive-In/Out – Parking |

## NM9-PB30B Crash Type – Bicycle *(continued)*

**Attribute Codes**

***2016-Later***

216 Bus/Delivery Vehicle Pullover
217 Motorist Right Turn on Red – Same Direction
218 Motorist Right Turn on Red – Opposite Direction
219 Motorist Turn/Merge – Other/Unknown
221 Bicyclist Left Turn – Same Direction
222 Bicyclist Left Turn – Opposite Direction
223 Bicyclist Right Turn – Same Direction
224 Bicyclist Right Turn – Opposite Direction
225 Bicyclist Ride-out – Parallel Path
231 Motorist Overtaking – Undetected Bicyclist
232 Motorist Overtaking – Misjudged Space
235 Motorist Overtaking – Bicyclist Swerved
239 Motorist Overtaking – Other/Unknown
241 Bicyclist Overtaking – Passing on Right
242 Bicyclist Overtaking – Passing on Left
243 Bicyclist Overtaking – Parked Vehicle
244 Bicyclist Overtaking – Extended Door
249 Bicyclist Overtaking – Other/Unknown
250 Wrong-Way/Wrong-Side – Bicyclist
255 Wrong-Way/Wrong-Side – Motorist
259 Wrong-Way/Wrong-Side – Unknown
280 Parallel Paths – Other/Unknown
311 Bicyclist Ride-Out – Residential Driveway
312 Bicyclist Ride-Out – Commercial Driveway
313 Bicyclist Ride-Out – Driveway, Unknown Type
318 Bicyclist Ride-Out – Other Midblock
319 Bicyclist Ride-Out – Unknown
321 Motorist Drive-Out – Residential Driveway
322 Motorist Drive-Out – Commercial Driveway
323 Motorist Drive-Out – Driveway, Unknown Type
328 Motorist Drive-Out – Other Midblock
329 Motorist Drive-Out – Midblock – Unknown
357 Multiple Threat – Midblock
380 Crossing Paths – Midblock – Other/Unknown
610 Backing Vehicle
700 Play Vehicle-Related
800 Unusual Circumstances
910 Non-Trafficway
970 Unknown Approach Paths
980 Unknown Location

## NM9-PB31 Crash Location – Pedestrian

**Definition:** This data element identifies where the pedestrian crash occurred with respect to an intersection.

**Additional Information:** This data element is applicable to pedestrians only.

**SAS Name: PEDLOC**

**Attribute Codes**

***2016-Later***

1 At Intersection
2 Intersection-Related
3 Not At Intersection
4 Non-Trafficway Location
7 Not a Pedestrian
9 Unknown/Insufficient Information

See Appendix F: Analysis of Pedestrian and Bicycle Crashes Around Intersections for guidance on analyzing Pedestrian/Bicyclist crash locations.

## NM9-PB31B Crash Location – Bicycle

**Definition:** This data element identifies where the bicyclist crash occurred with respect to an intersection.

**Additional Information:** This data element is applicable to bicyclists only.

**SAS Name:** **BIKELOC**

**Attribute Codes**

***2016-Later***

1 At Intersection
2 Intersection-Related
3 Not At Intersection
4 Non-Trafficway Location
7 Not a Cyclist
9 Unknown/Insufficient Information

See Appendix F: Analysis of Pedestrian and Bicycle Crashes Around Intersections for guidance on analyzing Pedestrian/Bicyclist crash locations.

## NM9-PB32 Pedestrian Position

**Definition:** This data element identifies the position/location of the pedestrian with respect to the trafficway when contacted.

**Additional Information:** This data element is applicable to pedestrians only.

**SAS Name: PEDPOS**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 1 | Intersection Area |
| 2 | Crosswalk Area |
| 3 | Travel Lane |
| 4 | Paved Shoulder/Bicycle Lane/Parking Lane |
| 5 | Sidewalk/Shared-Use Path/Driveway Access |
| 6 | Unpaved Right-of-Way |
| 7 | Non-Trafficway – Driveway |
| 8 | Non-Trafficway – Parking Lot/Other |
| 9 | Other/Unknown |
| 77 | Not a Pedestrian |

See Appendix F: Analysis of Pedestrian and Bicycle Crashes Around Intersections for guidance on analyzing Pedestrian/Bicyclist crash locations.

## NM9-PB32B Bicyclist Position

**Definition:** This data element identifies the position/location of the bicyclist with respect to the trafficway when contacted.

**Additional Information:** This data element is applicable to bicyclists only.

**SAS Name: BIKEPOS**

**Attribute Codes**

***2016-Later***

1 Travel Lane
2 Bicycle Lane/Paved Shoulder/Parking Lane
3 Sidewalk/Crosswalk/Driveway Access
4 Shared-Use Path
5 Non-Trafficway – Driveway
6 Non-Trafficway – Parking Lot/Other
7 Not a Cyclist
8 Other
9 Unknown

See Appendix F: Analysis of Pedestrian and Bicycle Crashes Around Intersections for guidance on analyzing Pedestrian/Bicyclist crash locations.

## NM9-PB33 Pedestrian Initial Direction of Travel

**Definition:** This data element identifies the initial direction of travel of the pedestrian prior to being contacted in the crash.

**Additional Information:** This data element is applicable to pedestrians only.

**SAS Name: PEDDIR**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 1 | 1 | Northbound |
| 2 | 2 | Eastbound |
| 3 | 3 | Southbound |
| 4 | 4 | Westbound |
| 7 | 7 | Not a Pedestrian |
| 8 | 8 | Not Applicable |
| 9 | -- | Unknown Initial Direction of Travel |
| -- | 9 | Not Derived / Unknown Initial Direction of Travel |

## NM9-PB33B Bicyclist Initial Direction of Travel

**Definition:** This data element identifies the initial travel direction of the bicyclist with respect to the flow of traffic prior to being contacted in the crash.

**Additional Information:** This data element is applicable to bicyclists only.

**SAS Name: BIKEDIR**

**Attribute Codes**

***2016-Later***

1 With Traffic
2 Facing Traffic
3 Not Applicable
7 Not a Cyclist
9 Unknown

## NM9-PB34 Motorist Initial Direction of Travel

**Definition:** This data element identifies the initial direction of travel of the motorist prior to being involved in a pedestrian crash.

**Additional Information:** This data element is applicable to pedestrians only.

**SAS Name: MOTDIR**

**Attribute Codes**

***2016-Later***

1 Northbound
2 Eastbound
3 Southbound
4 Westbound
7 Not a Pedestrian
8 Not Applicable
9 Unknown Initial Direction of Travel

## NM9-PB35 Motorist Maneuver

**Definition:** This data element identifies if the motorist was engaged in a turning maneuver at an intersection prior to being involved in a pedestrian crash. The data element indicates the maneuver being made by the motorist at the time of a pedestrian collision.

**Additional Information:** This data element is applicable to pedestrians only.

**SAS Name: MOTMAN**

**Attribute Codes**

***2016-Later***

1 Left Turn
2 Right Turn
3 Straight Through
7 Not a Pedestrian
8 Not Applicable
9 Unknown Motorist Maneuver

## NM9-PB36 Intersection Leg

**Definition:** The data element identifies the leg of the intersection where the pedestrian crash occurred.

**Additional Information:** This data element is applicable to pedestrians only.

**SAS Name: PEDLEG**

**Attribute Codes**

***2016-Later***

1 Nearside
2 Farside
7 Not a Pedestrian
8 Not Applicable
9 Unknown/None of the Above

## NM9-PB37 Pedestrian Scenario

**Definition:** This data element identifies the location and travel directions of the motorist and pedestrian for those crashes that occur at intersections. This data element summarizes the movements of the pedestrian and motorist in an intersection area.

**Additional Information:** This data element is applicable to pedestrians only.

**SAS Name: PEDSNR**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| **MOTORIST TRAVELING STRAIGHT THROUGH – CRASH OCCURRED ON NEAR (APPROACH) SIDE OF INTERSECTION** | | |
| 1a | 1a | Pedestrian Within Crosswalk Area, Traveled From Motorist's Left. |
| 1b | 1b | Pedestrian Within Crosswalk Area, Traveled From Motorist's Right. |
| 1c | 1c | Pedestrian Within Crosswalk Area, Approach Direction Unknown. |
| -- | 1d | Pedestrian Within Crosswalk Area, Other |
| 2a | 2a | Pedestrian Outside Crosswalk Area, Traveled From Motorist's Left. |
| 2b | 2b | Pedestrian Outside Crosswalk Area, Traveled From Motorist's Right. |
| 2c | 2c | Pedestrian Outside Crosswalk Area, Approach Direction Unknown. |
| -- | 2d | Pedestrian Outside Crosswalk Area, Other |
| **MOTORIST TRAVELING STRAIGHT THROUGH – CRASH OCCURRED ON FAR SIDE OF INTERSECTION** | | |
| 3a | 3a | Pedestrian Within Crosswalk Area, Traveled From Motorist's Left. |
| 3b | 3b | Pedestrian Within Crosswalk Area, Traveled From Motorist's Right. |
| 3c | 3c | Pedestrian Within Crosswalk Area, Approach Direction Unknown. |
| -- | 3d | Pedestrian Within Crosswalk Area, Other |
| 4a | 4a | Pedestrian Outside Crosswalk Area, Traveled From Motorist's Left. |
| 4b | 4b | Pedestrian Outside Crosswalk Area, Traveled From Motorist's Right. |
| 4c | 4c | Pedestrian Outside Crosswalk Area, Approach Direction Unknown. |
| -- | 4d | Pedestrian Outside Crosswalk Area, Other |
| **MOTORIST TURNING RIGHT – CRASH OCCURRED ON NEAR (APPROACH) SIDE OF INTERSECTION** | | |
| 5a | 5a | Pedestrian Within Crosswalk Area, Traveled From Motorist's Left. |
| 5b | 5b | Pedestrian Within Crosswalk Area, Traveled From Motorist's Right. |
| 5c | 5c | Pedestrian Within Crosswalk Area, Approach Direction Unknown. |
| -- | 5d | Pedestrian Within Crosswalk Area, Other |
| 6a | 6a | Pedestrian Outside Crosswalk Area, Traveled From Motorist's Left. |
| 6b | 6b | Pedestrian Outside Crosswalk Area, Traveled From Motorist's Right. |
| 6c | 6c | Pedestrian Outside Crosswalk Area, Approach Direction Unknown. |
| -- | 6d | Pedestrian Outside Crosswalk Area, Other |

## NM9-PB37 Pedestrian Scenario *(continued)*

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| **MOTORIST TURNING RIGHT – CRASH OCCURRED ON FAR SIDE OF INTERSECTION** | | |
| 7a | 7a | Pedestrian Within Crosswalk Area, Approach Direction Same as Motorist's. |
| 7b | 7b | Pedestrian Within Crosswalk Area, Approach Direction Opposite Motorist's. |
| 7c | 7c | Pedestrian Within Crosswalk Area, Approach Direction Unknown. |
| -- | 7d | Pedestrian Within Crosswalk Area, Other |
| 8a | 8a | Pedestrian Outside Crosswalk Area, Approach Direction Same as Motorist's. |
| 8b | 8b | Pedestrian Outside Crosswalk Area, Approach Direction Opposite Motorist's. |
| 8c | 8c | Pedestrian Outside Crosswalk Area, Approach Direction Unknown. |
| -- | 8d | Pedestrian Outside Crosswalk Area, Other |
| **MOTORIST TURNING LEFT – CRASH OCCURRED ON NEAR (APPROACH) SIDE OF INTERSECTION** | | |
| 9a | 9a | Pedestrian Within Crosswalk Area, Traveled From Motorist's Left. |
| 9b | 9b | Pedestrian Within Crosswalk Area, Traveled From Motorist's Right. |
| 9c | 9c | Pedestrian Within Crosswalk Area, Approach Direction Unknown. |
| -- | 9d | Pedestrian Within Crosswalk Area, Other |
| 10a | 10a | Pedestrian Outside Crosswalk Area, Traveled From Motorist's Left. |
| 10b | 10b | Pedestrian Outside Crosswalk Area, Traveled From Motorist's Right. |
| 10c | 10c | Pedestrian Outside Crosswalk Area, Approach Direction Unknown. |
| -- | 10d | Pedestrian Outside Crosswalk Area, Other |
| **MOTORIST TURNING LEFT – CRASH OCCURRED ON FAR SIDE OF INTERSECTION** | | |
| 11a | 11a | Pedestrian Within Crosswalk Area, Approach Direction Same as Motorist's. |
| 11b | 11b | Pedestrian Within Crosswalk Area, Approach Direction Opposite Motorist's. |
| 11c | 11c | Pedestrian Within Crosswalk Area, Approach Direction Unknown. |
| -- | 11d | Pedestrian Within Crosswalk Area, Other |
| 12a | 12a | Pedestrian Outside Crosswalk Area, Approach Direction Same as Motorist's. |
| 12b | 12b | Pedestrian Outside Crosswalk Area, Approach Direction Opposite Motorist's. |
| 12c | 12c | Pedestrian Outside Crosswalk Area, Approach Direction Unknown. |
| -- | 12d | Pedestrian Outside Crosswalk Area, Other |
| 7 | 7 | Not a Pedestrian |
| 8 | 8 | Not Applicable |
| -- | 99 | Unknown/Insufficient Information |

## NM9-PB38 Crash Group – Pedestrian

**Definition:** This data element provides general groupings of the more specific individual Pedestrian Crash Types.

**Additional Information:** This data element is applicable to pedestrians only.

**SAS Name: PEDCGP**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | Not a Pedestrian |
| 100 | 100 | Unusual Circumstances |
| 200 | 200 | Backing Vehicle |
| 310 | 310 | Working or Playing in Roadway |
| 340 | -- | Bus-Related |
| -- | 340 | Bus Stop-Related |
| 350 | 350 | Unique Midblock |
| 400 | 400 | Walking/Running Along Roadway |
| 460 | 460 | Driveway Access/ Driveway Access Related |
| 500 | 500 | Waiting to Cross |
| 600 | 600 | Pedestrian in Roadway – Circumstances Unknown |
| 720 | 720 | Multiple Threat/Trapped |
| 740 | 740 | Dash/Dart-Out |
| 750 | 750 | Crossing Roadway – Vehicle Not Turning |
| 790 | 790 | Crossing Roadway – Vehicle Turning |
| 800 | 800 | Non-Trafficway |
| 910 | 910 | Crossing Expressway |
| 990 | 990 | Other/Unknown – Insufficient Details |

## NM9-PB38B Crash Group – Bicycle

**Definition:** This data element provides general groupings of the more specific individual Bicyclist Crash Types.

**Additional Information:** This data element is applicable to bicyclists only.

**SAS Name:** BIKECGP

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Not a Cyclist |
| 110 | Loss of Control/Turning Error |
| 140 | Motorist Failed to Yield – Sign-Controlled Intersection |
| 145 | Bicyclist Failed to Yield – Sign-Controlled Intersection |
| 150 | Motorist Failed to Yield – Signalized Intersection |
| 158 | Bicyclist Failed to Yield – Signalized Intersection |
| 190 | Crossing Paths – Other Circumstances |
| 210 | Motorist Left Turn/Merge |
| 215 | Motorist Right Turn/Merge |
| 219 | Parking/Bus-Related |
| 220 | Bicyclist Left Turn/Merge |
| 225 | Bicyclist Right Turn/Merge |
| 230 | Motorist Overtaking Bicyclist |
| 240 | Bicyclist Overtaking Motorist |
| 258 | Wrong-Way/Wrong-Side |
| 290 | Parallel Paths – Other Circumstances |
| 310 | Bicyclist Failed to Yield – Midblock |
| 320 | Motorist Failed to Yield – Midblock |
| 600 | Backing Vehicle |
| 850 | Other/Unusual Circumstances |
| 910 | Non-Trafficway |
| 990 | Other/Unknown – Insufficient Details |

## The CEVENT Data File

The Cevent data file includes harmful and non-harmful events in the crash. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, and EVENTNUM, which are described in the beginning of the Data Element Definitions and Codes section. The Cevent data file also contains the data elements on the following pages.

CASENUM and EVENTNUM are the unique identifiers for each record. CASENUM should be used to merge the Cevent data file with the Accident data file.

## C18A Vehicle Number (This Vehicle)

**Definition:** This data element identifies the "Vehicle Number" (VEH_NO) of this in-transport motor vehicle described in this event.

**Additional Information:** This is the vehicle described in "Sequence of Events" for this event.

**SAS Name:** **VNUMBER1**

**Attribute Codes**

***2016-Later***

1-999 Vehicle Number

## C18B Area of Impact (This Vehicle)

**Definition:** This data element identifies the impact point, if any, on this in-transport motor vehicle that produced property damage or personal injury in this event.

**Additional Information:** This is the impact area of the vehicle recorded in "Vehicle Number (This Vehicle)" and described in "Sequence of Events."

**SAS Name:** **AOI1**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | Non-Collision |
| 1-12 | 1-12 | Clock points |
| 13 | 13 | Top |
| 14 | 14 | Undercarriage |
| 18 | 18 | Cargo/Vehicle Parts Set-In-Motion |
| 19 | 19 | Other Objects Set-In-Motion |
| -- | 20 | Object Set in Motion, Unknown if Cargo/Vehicle Parts or Other |
| 55 | 55 | Non-Harmful Event |
| 61 | 61 | Left |
| 62 | 62 | Left-Front Side |
| 63 | 63 | Left-Back Side |
| 81 | 81 | Right |
| 82 | 82 | Right-Front Side |
| 83 | 83 | Right-Back Side |
| 98 | 98 | Not Reported |
| 99 | 99 | Unknown |

## V32 Sequence of Events

**Definition:** This data element describes this event. A motor vehicle traffic crash is a series of events resulting from an unstabilized situation. This series of harmful and non-harmful events is recorded in chronological order based on the police crash report narrative and diagram.

**Additional Information:** "First Harmful Event, Most Harmful Event," and the "Sequence of Events" data elements have the same harmful event attributes. "Sequence of Events" also has non-harmful event attributes.

**SAS Name: SOE**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| | | *NON-HARMFUL EVENTS* |
| 60 | 60 | Cargo/Equipment Loss or Shift *(non-harmful)* |
| 61 | 61 | Equipment Failure *(blown tire, brake failure, etc.)* |
| 62 | 62 | Separation of Units |
| 63 | 63 | Ran Off Roadway-Right |
| 64 | 64 | Ran Off Roadway-Left |
| 65 | 65 | Cross Median |
| 66 | 66 | Downhill Runaway |
| 67 | 67 | Vehicle Went Airborne |
| 68 | 68 | Cross Centerline |
| 69 | 69 | Re-entering Roadway |
| 70 | 70 | Non-harmful, Swaying Trailer/Jackknife |
| 71 | 71 | End Departure |
| 79 | 79 | Ran off Roadway - Direction Unknown |
| | | *NON-COLLISION HARMFUL EVENTS* |
| 1 | 1 | Rollover/Overturn |
| 2 | 2 | Fire/Explosion |
| 3 | 3 | Immersion or Partial Immersion |
| 4 | 4 | Gas Inhalation |
| 5 | 5 | Fell/Jumped from Vehicle |
| 6 | 6 | Injured in Vehicle *(Non-Collision)* |
| 7 | 7 | Other Noncollision |
| 16 | 16 | Thrown or Falling Object |
| 44 | 44 | Pavement Surface Irregularity *(Ruts, Potholes, Grates, etc.)* |
| 51 | 51 | Jackknife *(Harmful to This Vehicle)* |
| 72 | 72 | Cargo/Equipment Loss or Shift *(Harmful to This Vehicle)* |
| | | *COLLISION WITH MOTOR VEHICLE IN TRANSPORT* |
| 12 | 12 | Motor Vehicle In-Transport |
| 54 | 54 | Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport |
| 55 | 55 | Motor Vehicle in Motion Outside the Trafficway |

## V32 Sequence of Events *(continued)*

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| | | *COLLISION WITH OBJECT NOT FIXED* |
| 8 | 8 | Pedestrian |
| 9 | 9 | Pedalcyclist |
| 10 | 10 | Railway Vehicle |
| 11 | 11 | Live Animal |
| 14 | 14 | Parked Motor Vehicle |
| 15 | 15 | Non-Motorist on Personal Conveyance |
| 18 | 18 | Other Object Not Fixed |
| 45 | 45 | Working Motor Vehicle |
| 49 | 49 | Ridden Animal or Animal Drawn Conveyance |
| 73 | 73 | Object That Had Fallen From Motor Vehicle In-Transport |
| 74 | 74 | Road Vehicle on Rails |
| -- | 91 | Unknown Object Not Fixed |
| | | *COLLISION WITH FIXED OBJECT* |
| 17 | 17 | Boulder |
| 19 | 19 | Building |
| 20 | 20 | Impact Attenuator/Crash Cushion |
| 21 | 21 | Bridge Pier or Support |
| 23 | 23 | Bridge Rail *(Includes Parapet)* |
| 24 | 24 | Guardrail Face |
| 25 | 25 | Concrete Traffic Barrier |
| 26 | 26 | Other Traffic Barrier |
| 30 | 30 | Utility Pole/Light Support |
| 31 | 31 | Post, Pole or Other Support |
| 32 | 32 | Culvert |
| 33 | 33 | Curb |
| 34 | 34 | Ditch |
| 35 | 35 | Embankment |
| 38 | 38 | Fence |
| 39 | 39 | Wall |
| 40 | 40 | Fire Hydrant |
| 41 | 41 | Shrubbery |
| 42 | 42 | Tree *(Standing Only)* |
| 43 | 43 | Other Fixed Object |
| 46 | 46 | Traffic Signal Support |
| 48 | 48 | Snow Bank |
| 50 | 50 | Bridge Overhead Structure |
| 52 | 52 | Guardrail End |
| 53 | 53 | Mail Box |
| 57 | 57 | Cable Barrier |
| 58 | 58 | Ground |
| 59 | 59 | Traffic Sign Support |
| -- | 93 | Unknown Fixed Object |
| 99 | 99 | Unknown |

## C18C Vehicle Number (Other Vehicle)

**Definition:** This data element identifies the "Vehicle Number" (VEH_NO) of the other motor vehicle, if any, in this event.

**Additional Information:** This is the vehicle contacted by the motor vehicle in-transport recorded in "Vehicle Number (This Vehicle)." Another vehicle must have been involved in this event for this data element to be a valid vehicle number (i.e., "Sequence of Events" for this event must be 12, 14, 45, 54, or 55).

**SAS Name:** **VNUMBER2**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 1-999 | Vehicle Number |
| 5555 | Non-Harmful Event |
| 9999 | Not a Motor Vehicle |

## C18D Area of Impact (Other Vehicle)

**Definition:** This data element identifies the impact point on the other motor vehicle, if any, in this event.

**Additional Information:** This is the impact area of the vehicle recorded in "Vehicle Number (Other Vehicle)." Another vehicle must have been involved in this event for this data element to be a valid impact location (i.e., "Sequence of Events" for this event must be 12, 14, 45, 54, or 55).

**SAS Name: AOI2**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | Non-Collision |
| 1-12 | 1-12 | Clock points |
| 13 | 13 | Top |
| 14 | 14 | Undercarriage |
| 18 | 18 | Cargo/Vehicle Parts Set-In-Motion |
| 19 | 19 | Other Objects Set-In-Motion |
| -- | 20 | Object Set in Motion, Unknown if Cargo/Vehicle Parts or Other |
| 55 | 55 | Non-Harmful Event |
| 61 | 61 | Left |
| 62 | 62 | Left-Front Side |
| 63 | 63 | Left-Back Side |
| 81 | 81 | Right |
| 82 | 82 | Right-Front Side |
| 83 | 83 | Right-Back Side |
| 98 | 98 | Not Reported |
| 99 | 99 | Unknown |

## The VEVENT Data File

The Vevent data file includes harmful and non-harmful events for each in-transport motor vehicle. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, VEH_NO, EVENTNUM, and VEVENTNUM, which are described in the beginning of the Data Element Definitions and Codes section. The Vevent data file also contains the data elements on the following pages.

CASENUM, VEH_NO, and VEVENTNUM are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Vevent data file with the Vehicle data file.

## C18A Vehicle Number (This Vehicle)

**Definition:** This data element identifies the "Vehicle Number" (VEH_NO) of the in-transport motor vehicle described in this event.

**Additional Information:** This is the vehicle described in "Sequence of Events" for this event.

If Vehicle #1 (V1) impacts Vehicle #2 (V2), then we have at least 2 Vevent records.

Example:

| VEH_NO | EVENTNUM | VNUMBER1 | SOE | VNUMBER2 |
|---|---|---|---|---|
| 1 | 1 | 1 | 12 | 2 |
| 2 | 1 | 1 | 12 | 2 |

The explanation of these 2 records is as follows:

V1 was involved in event 1 where V1 impacts V2

V2 was involved in event 1 where V1 impacts V2

**SAS Name:** **VNUMBER1**

**Attribute Codes**

***2016-Later***

1-999 Vehicle Number

## C18B Area of Impact (This Vehicle)

**Definition:** This data element identifies the impact point, if any, on this in-transport motor vehicle that produced property damage or personal injury in this event.

**Additional Information:**

**SAS Name:** **AOI1**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | Non-Collision |
| 1-12 | 1-12 | Clock points |
| 13 | 13 | Top |
| 14 | 14 | Undercarriage |
| 18 | 18 | Cargo/Vehicle Parts Set-In-Motion |
| 19 | 19 | Other Objects Set-In-Motion |
| -- | 20 | Object Set in Motion, Unknown if Cargo/Vehicle Parts or Other |
| 55 | 55 | Non-Harmful Event |
| 61 | 61 | Left |
| 62 | 62 | Left-Front Side |
| 63 | 63 | Left-Back Side |
| 81 | 81 | Right |
| 82 | 82 | Right-Front Side |
| 83 | 83 | Right-Back Side |
| 98 | 98 | Not Reported |
| 99 | 99 | Unknown |

## V32 Sequence of Events

**Definition:** This data element describes this event. A motor vehicle traffic crash is a series of events resulting from an unstabilized situation. This series of harmful and non-harmful events is recorded in chronological order based on the police crash report narrative and diagram.

**Additional Information:** "First Harmful Event, Most Harmful Event," and the "Sequence of Events" data elements have the same harmful event attributes. "Sequence of Events" also has non-harmful event attributes.

**SAS Name: SOE**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| | | *NON-HARMFUL EVENTS* |
| 60 | 60 | Cargo/Equipment Loss or Shift *(non-harmful)* |
| 61 | 61 | Equipment Failure *(blown tire, brake failure, etc.)* |
| 62 | 62 | Separation of Units |
| 63 | 63 | Ran Off Roadway-Right |
| 64 | 64 | Ran Off Roadway-Left |
| 65 | 65 | Cross Median |
| 66 | 66 | Downhill Runaway |
| 67 | 67 | Vehicle Went Airborne |
| 68 | 68 | Cross Centerline |
| 69 | 69 | Re-entering Roadway |
| 70 | 70 | Non-harmful, Swaying Trailer/Jackknife |
| 71 | 71 | End Departure |
| 79 | 79 | Ran off Roadway - Direction Unknown |
| | | *NON-COLLISION HARMFUL EVENTS* |
| 1 | 1 | Rollover/Overturn |
| 2 | 2 | Fire/Explosion |
| 3 | 3 | Immersion or Partial Immersion |
| 4 | 4 | Gas Inhalation |
| 5 | 5 | Fell/Jumped from Vehicle |
| 6 | 6 | Injured in Vehicle *(Non-Collision)* |
| 7 | 7 | Other Noncollision |
| 16 | 16 | Thrown or Falling Object |
| 44 | 44 | Pavement Surface Irregularity *(Ruts, Potholes, Grates, etc.)* |
| 51 | 51 | Jackknife *(Harmful to This Vehicle)* |
| 72 | 72 | Cargo/Equipment Loss or Shift *(Harmful to This Vehicle)* |
| | | *COLLISION WITH MOTOR VEHICLE IN TRANSPORT* |
| 12 | 12 | Motor Vehicle In-Transport |
| 54 | 54 | Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport |
| 55 | 55 | Motor Vehicle in Motion Outside the Trafficway |

## V32 Sequence of Events *(continued)*

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| | | *COLLISION WITH OBJECT NOT FIXED* |
| 8 | 8 | Pedestrian |
| 9 | 9 | Pedalcyclist |
| 10 | 10 | Railway Vehicle |
| 11 | 11 | Live Animal |
| 14 | 14 | Parked Motor Vehicle |
| 15 | 15 | Non-Motorist on Personal Conveyance |
| 18 | 18 | Other Object Not Fixed |
| 45 | 45 | Working Motor Vehicle |
| 49 | 49 | Ridden Animal or Animal Drawn Conveyance |
| 73 | 73 | Object That Had Fallen From Motor Vehicle In-Transport |
| 74 | 74 | Road Vehicle on Rails |
| -- | 91 | Unknown Object Not Fixed |
| | | *COLLISION WITH FIXED OBJECT* |
| 17 | 17 | Boulder |
| 19 | 19 | Building |
| 20 | 20 | Impact Attenuator/Crash Cushion |
| 21 | 21 | Bridge Pier or Support |
| 23 | 23 | Bridge Rail *(Includes Parapet)* |
| 24 | 24 | Guardrail Face |
| 25 | 25 | Concrete Traffic Barrier |
| 26 | 26 | Other Traffic Barrier |
| 30 | 30 | Utility Pole/Light Support |
| 31 | 31 | Post, Pole or Other Support |
| 32 | 32 | Culvert |
| 33 | 33 | Curb |
| 34 | 34 | Ditch |
| 35 | 35 | Embankment |
| 38 | 38 | Fence |
| 39 | 39 | Wall |
| 40 | 40 | Fire Hydrant |
| 41 | 41 | Shrubbery |
| 42 | 42 | Tree *(Standing Only)* |
| 43 | 43 | Other Fixed Object |
| 46 | 46 | Traffic Signal Support |
| 48 | 48 | Snow Bank |
| 50 | 50 | Bridge Overhead Structure |
| 52 | 52 | Guardrail End |
| 53 | 53 | Mail Box |
| 57 | 57 | Cable Barrier |
| 58 | 58 | Ground |
| 59 | 59 | Traffic Sign Support |
| -- | 93 | Unknown Fixed Object |
| 99 | 99 | Unknown |

## C18C Vehicle Number (Other Vehicle)

**Definition:** This data element identifies the "Vehicle Number" (VEH_NO) of the other motor vehicle, if any, in this event.

**Additional Information:** This is the vehicle contacted by the motor vehicle in-transport recorded in "Vehicle Number (This Vehicle)." Another vehicle must have been involved in this event for this data element to be a valid vehicle number (i.e., "Sequence of Events" for this event must be 12, 14, 45, 54, or 55).

**SAS Name:** **VNUMBER2**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 1-999 | Vehicle Number |
| 5555 | Non-Harmful Event |
| 9999 | Not a Motor Vehicle |

## C18D Area of Impact (Other Vehicle)

**Definition:** This data element identifies the impact point on the other motor vehicle, if any, in this event.

**Additional Information:** This is the impact area of the vehicle recorded in "Vehicle Number (Other Vehicle)." Another vehicle must have been involved in this event for this data element to be a valid impact location (i.e., "Sequence of Events" for this event must be 12, 14, 45, 54, or 55).

**SAS Name: AOI2**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | Non-Collision |
| 1-12 | 1-12 | Clock points |
| 13 | 13 | Top |
| 14 | 14 | Undercarriage |
| 18 | 18 | Cargo/Vehicle Parts Set-In-Motion |
| 19 | 19 | Other Objects Set-In-Motion |
| -- | 20 | Object Set in Motion, Unknown if Cargo/Vehicle Parts or Other |
| 55 | 55 | Non-Harmful Event |
| 61 | 61 | Left |
| 62 | 62 | Left-Front Side |
| 63 | 63 | Left-Back Side |
| 81 | 81 | Right |
| 82 | 82 | Right-Front Side |
| 83 | 83 | Right-Back Side |
| 98 | 98 | Not Reported |
| 99 | 99 | Unknown |

## The VSOE Data File

The Vsoe data file includes harmful and non-harmful events for each in-transport motor vehicle. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, VEH_NO, and VEVENTNUM, which are described in the beginning of the Data Element Definitions and Codes section. The Vsoe data file also contains the data elements on the following pages.

CASENUM, VEH_NO, and VEVENTNUM are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Vsoe data file with the Vehicle data file.

## C18B Area of Impact Associated with the Event

**Definition:** This data element identifies the impact point, if any, on this in-transport motor vehicle that produced property damage or personal injury in this event.

**Additional Information:** This is the impact area of the vehicle recorded in "Vehicle Number (This Vehicle)" and described in "Sequence of Events."

**SAS Name:** **AOI**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | Non-Collision |
| 1-12 | 1-12 | Clock points |
| 13 | 13 | Top |
| 14 | 14 | Undercarriage |
| 18 | 18 | Cargo/Vehicle Parts Set-In-Motion |
| 19 | 19 | Other Objects Set-In-Motion |
| -- | 20 | Object Set in Motion, Unknown if Cargo/Vehicle Parts or Other |
| 55 | 55 | Non-Harmful Event |
| 61 | 61 | Left |
| 62 | 62 | Left-Front Side |
| 63 | 63 | Left-Back Side |
| 81 | 81 | Right |
| 82 | 82 | Right-Front Side |
| 83 | 83 | Right-Back Side |
| 98 | 98 | Not Reported |
| 99 | 99 | Unknown |

## V32 Sequence of Events

**Definition:** The events in sequence related to this motor vehicle, regardless of injury and/or property damage. Events for the vehicle are recorded in the order in which they occur, time-wise, from the police crash report narrative and diagram.

**Additional Information:** "First Harmful Event," "Most Harmful Event," and the "Sequence of Events" data elements have the same harmful event attributes. "Sequence of Events" also has non-harmful event attributes.

**SAS Name: SOE**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| | | *NON-HARMFUL EVENTS* |
| 60 | 60 | Cargo/Equipment Loss or Shift *(non-harmful)* |
| 61 | 61 | Equipment Failure *(blown tire, brake failure, etc.)* |
| 62 | 62 | Separation of Units |
| 63 | 63 | Ran Off Roadway-Right |
| 64 | 64 | Ran Off Roadway-Left |
| 65 | 65 | Cross Median |
| 66 | 66 | Downhill Runaway |
| 67 | 67 | Vehicle Went Airborne |
| 68 | 68 | Cross Centerline |
| 69 | 69 | Re-entering Roadway |
| 70 | 70 | Non-harmful, Swaying Trailer/Jackknife |
| 71 | 71 | End Departure |
| 79 | 79 | Ran off Roadway - Direction Unknown |
| | | *NON-COLLISION HARMFUL EVENTS* |
| 1 | 1 | Rollover/Overturn |
| 2 | 2 | Fire/Explosion |
| 3 | 3 | Immersion or Partial Immersion |
| 4 | 4 | Gas Inhalation |
| 5 | 5 | Fell/Jumped from Vehicle |
| 6 | 6 | Injured in Vehicle *(Non-Collision)* |
| 7 | 7 | Other Noncollision |
| 16 | 16 | Thrown or Falling Object |
| 44 | 44 | Pavement Surface Irregularity *(Ruts, Potholes, Grates, etc.)* |
| 51 | 51 | Jackknife *(Harmful to This Vehicle)* |
| 72 | 72 | Cargo/Equipment Loss or Shift *(Harmful to This Vehicle)* |
| | | *COLLISION WITH MOTOR VEHICLE IN TRANSPORT* |
| 12 | 12 | Motor Vehicle In-Transport |
| 54 | 54 | Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport |
| 55 | 55 | Motor Vehicle in Motion Outside the Trafficway |

## V32 Sequence of Events *(continued)*

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| | | *COLLISION WITH OBJECT NOT FIXED* |
| 8 | 8 | Pedestrian |
| 9 | 9 | Pedalcyclist |
| 10 | 10 | Railway Vehicle |
| 11 | 11 | Live Animal |
| 14 | 14 | Parked Motor Vehicle |
| 15 | 15 | Non-Motorist on Personal Conveyance |
| 18 | 18 | Other Object Not Fixed |
| 45 | 45 | Working Motor Vehicle |
| 49 | 49 | Ridden Animal or Animal Drawn Conveyance |
| 73 | 73 | Object That Had Fallen From Motor Vehicle In-Transport |
| 74 | 74 | Road Vehicle on Rails |
| -- | 91 | Unknown Object Not Fixed |
| | | *COLLISION WITH FIXED OBJECT* |
| 17 | 17 | Boulder |
| 19 | 19 | Building |
| 20 | 20 | Impact Attenuator/Crash Cushion |
| 21 | 21 | Bridge Pier or Support |
| 23 | 23 | Bridge Rail *(Includes Parapet)* |
| 24 | 24 | Guardrail Face |
| 25 | 25 | Concrete Traffic Barrier |
| 26 | 26 | Other Traffic Barrier |
| 30 | 30 | Utility Pole/Light Support |
| 31 | 31 | Post, Pole or Other Support |
| 32 | 32 | Culvert |
| 33 | 33 | Curb |
| 34 | 34 | Ditch |
| 35 | 35 | Embankment |
| 38 | 38 | Fence |
| 39 | 39 | Wall |
| 40 | 40 | Fire Hydrant |
| 41 | 41 | Shrubbery |
| 42 | 42 | Tree *(Standing Only)* |
| 43 | 43 | Other Fixed Object |
| 46 | 46 | Traffic Signal Support |
| 48 | 48 | Snow Bank |
| 50 | 50 | Bridge Overhead Structure |
| 52 | 52 | Guardrail End |
| 53 | 53 | Mail Box |
| 57 | 57 | Cable Barrier |
| 58 | 58 | Ground |
| 59 | 59 | Traffic Sign Support |
| -- | 93 | Unknown Fixed Object |
| 99 | 99 | Unknown |

## The DAMAGE Data File

The Damage data file identifies each area of damage as a separate record. That is, there can be more than one damage record for each vehicle. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, and VEH_NO, which are described in the beginning of the Data Element Definitions and Codes section. The Damage data file also contains the data elements on the following pages.

CASENUM and VEH_NO are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Damage data file with vehicles from the Vehicle data file.

## V29B Damaged Areas

**Definition:** This data element identifies all the areas on this vehicle that were damaged in the crash as reflected in the case materials.

**Additional Information:**

**SAS Name: MDAREAS**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 1-12 | Clock points |
| 13 | Top |
| 14 | Undercarriage |
| 15 | No Damage |
| 99 | Unknown |

## The DISTRACT Data File

The Distract data file identifies each driver distraction as a separate record. That is, there can be more than one distraction record for each driver. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, and VEH_NO, which are described in the beginning of the Data Element Definitions and Codes section. The data file also contains MDRDSTRD which is described below.

CASENUM, VEH_NO, and MDRDSTRD are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Distract data file with drivers from the Vehicle data file.

## PC16 Driver Distracted By

**Definition:** This data element identifies the attribute(s) which best describe this driver's attention to driving prior to the driver's realization of an impending critical event or just prior to impact if realization of an impending critical event does not occur.

**Additional Information:** Distraction from the primary task of driving occurs when drivers divert their attention from the driving task to some other activity. Also, driving while daydreaming or lost in thought is identified as distracted driving by NHTSA. Physical conditions/impairments (fatigue, alcohol, medical condition, etc.) or psychological states (anger, emotional, depressed, etc.) are not identified as distractions by NHTSA.

**SAS Name: MDRDSTRD**

**Attribute Codes**

***2016-Later***

0 Not Distracted
1 Looked But Did Not See
3 By Other Occupants
4 By a Moving Object In Vehicle
5 While Talking Or Listening To Cellular Phone
6 While Manipulating Cellular Phone
7 While Adjusting Audio Or Climate Controls
9 While Using Other Component/Controls Integral To Vehicle
10 While Using Or Reaching For Device/Object Brought into Vehicle
12 Distracted By Outside Person, Object Or Event
13 Eating Or Drinking
14 Smoking Related
15 Other Cellular Phone Related
16 No Driver Present/Unknown if Driver Present
17 Distraction/Inattention
18 Distraction/Careless
19 Careless/Inattentive
92 Distraction *(Distracted)*, Details Unknown
93 Inattention *(Inattentive)*, Details Unknown
96 Not Reported
97 Lost In Thought/Day Dreaming
98 Other Distraction
99 Unknown If Distracted

## The DRIMPAIR Data File

The Drimpair data file identifies each driver impairment as a separate record. That is, there can be more than one impairment record for each driver. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, and VEH_NO, which are described in the beginning of the Data Element Definitions and Codes section. The data file also contains DRIMPAIR which is described below.

CASENUM, VEH_NO, and DRIMPAIR are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Drimpair data file with drivers from the Vehicle data file.

## D23 Condition (Impairment) at Time of Crash- Driver

**Definition:** This data element identifies physical impairments to this driver that may have contributed to the crash as identified by law enforcement.

**Additional Information:**

**SAS Name: MIMPAIR**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | None/Apparently Normal |
| 1 | 1 | Ill, Blackout |
| 2 | 2 | Asleep or Fatigued |
| 3 | 3 | Walking with a Cane or Crutches, etc. |
| 4 | -- | Paraplegic or Restricted to Wheelchair |
| -- | 4 | Paraplegic or in a Wheelchair |
| 5 | 5 | Impaired Due to Previous Injury |
| 6 | 6 | Deaf |
| 7 | 7 | Blind |
| 8 | 8 | Emotional *(Depressed, Angry, Disturbed, etc.)* |
| 9 | 9 | Under the Influence of Alcohol, Drugs or Medication |
| 10 | 10 | Physical Impairment – No Details |
| 95 | 95 | No Driver Present/Unknown if Driver Present |
| 96 | 96 | Other Physical Impairment |
| 98 | 98 | Not Reported |
| 99 | 99 | Unknown if Impaired |

## The FACTOR Data File

The Factor data file identifies each vehicle factor as a separate record. That is, there can be more than one factor record for each vehicle. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, and VEH_NO, which are described in the beginning of the Data Element Definitions and Codes section. The data file also contains MFACTOR which is described below.

CASENUM, VEH_NO, and MFACTOR are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Factor data file with vehicles from the Vehicle data file.

## PC4 Contributing Circumstances, Motor Vehicle

**Definition:** This data element describes this vehicle's possible pre-existing defects or maintenance conditions that may have contributed to the crash.

**Additional Information:**

**SAS Name: MFACTOR**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | None |
| 1 | Tires |
| 2 | Brake System |
| 3 | Steering System-Tie Rod, Kingpin, Ball Joint, etc. |
| 4 | Suspension-Springs, Shock Absorbers, McPherson Struts, Control Arms, etc. |
| 5 | Power Train-Universal Joint, Drive Shaft, Transmission, etc. |
| 6 | Exhaust System |
| 7 | Headlights |
| 8 | Signal Lights |
| 9 | Other Lights |
| 10 | Wipers |
| 11 | Wheels |
| 12 | Mirrors |
| 13 | Windows/Windshield |
| 14 | Body, Doors |
| 15 | Truck Coupling/Trailer Hitch/Safety Chains |
| 16 | Safety Systems |
| 17 | Vehicle Contributing Factors-No Details |
| 97 | Other |
| 98 | Not Reported |
| 99 | Unknown |

## The MANEUVER Data File

The Maneuver data file identifies each avoidance attempt as a separate record. That is, there can be more than one maneuver record for each driver. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, and VEH_NO, which are described in the beginning of the Data Element Definitions and Codes section. The data file also contains MDRMANAV which is described below.

CASENUM, VEH_NO, and MDRMANAV are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Maneuver data file with vehicles from the Vehicle data file.

## PC15 Driver Maneuvered to Avoid

**Definition:** This data element identifies the thing(s) this driver attempted to avoid while the vehicle was on the road portion of the trafficway, just prior to the first harmful event for this vehicle.

**Additional Information:**

**SAS Name: MDRMANAV**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | Driver Did Not Maneuver To Avoid |
| 1 | Object In Road |
| 2 | Poor Road Conditions *(Puddle, Ice, Pot Hole, etc.)* |
| 3 | Live Animal |
| 4 | Motor Vehicle |
| 5 | Pedestrian, Pedalcyclist, or Other Non-Motorist in the Road |
| 92 | Phantom/Non-Contact Motor Vehicle |
| 95 | No Driver Present/Unknown if Driver Present |
| 98 | Not Reported |
| 99 | Unknown If Driver Maneuvered To Avoid |

## The VIOLATN Data File

The Violatn data file identifies each violation as a separate record. That is, there can be more than one violation record for each driver. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, and VEH_NO, which are described in the beginning of the Data Element Definitions and Codes section. The data file also contains MVIOLATN which is described below.

CASENUM, VEH_NO, and MVIOLATN are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Violatn data file with drivers from the Vehicle data file.

## D21 Violations Charged

**Definition:** This data element identifies all violations charged to this driver.

**Additional Information:**

**SAS Name: MVIOLATN**

**Attribute Codes**

***2016-Later***

0 None

*RECKLESS/CARELESS/HIT-AND-RUN TYPE OFFENSES*

1 Manslaughter or Homicide
2 Willful Reckless Driving; Driving to Endanger; Negligent Driving
3 Unsafe Reckless *(Not Willful, Wanton Reckless)* Driving
4 Inattentive, Careless, Improper Driving
5 Fleeing or Eluding Police
6 Fail to Obey Police, Fireman, Authorized Person Directing Traffic
7 Hit-And-Run, Fail to Stop After Crash
8 Fail to Give Aid, Information, Wait For Police After Crash
9 Serious Violation Resulting In Death
10 Use of Telecommunications Device

*IMPAIRMENT OFFENSES*

11 Driving While Intoxicated *(Alcohol Or Drugs)* Or BAC Above Limit *(Any Detectable BAC for CDLs)*
12 Driving While Impaired
13 Driving Under Influence of Substance Not Intended To Intoxicate
14 Drinking While Operating
15 Illegal Possession of Alcohol or Drugs
16 Driving With Detectable Alcohol
18 Refusal to Submit to Chemical Test
19 Alcohol, Drug or Impairment Violations Generally

*SPEED-RELATED OFFENSES*

21 Racing
22 Speeding *(Above The Speed Limit)*
23 Speed Greater than Reasonable & Prudent *(Not Necessarily Over The Limit)*
24 Exceeding Special Limit
25 Energy Speed *(Exceeding 55 mph, Non-Pointable)*
26 Driving Too Slowly
29 Speed Related Violations, Generally

## D21 Violations Charged *(continued)*

*RULES OF THE ROAD – TRAFFIC SIGN & SIGNALS*

31 Fail to Stop For Red Signal
32 Fail to Stop For Flashing Red
33 Violation of Turn On Red *(Fail to Stop & Yield, Yield to Pedestrians Before Turning)*
34 Fail to Obey Flashing Signal *(Yellow Or Red)*
35 Fail to Obey Signal, Generally
36 Violate RR Grade Crossing Device/Regulations
37 Fail to Obey Stop Sign
38 Fail to Obey Yield Sign
39 Fail to Obey Traffic Control Device

*RULES OF THE ROAD – TURNING, YIELDING, SIGNALING*

41 Turn in Violation of Traffic Control *(Disobey Signs, Turn Arrow Or Pavement Markings; This Is Not A Right-On-Red Violation)*
42 Improper Method & Position of Turn *(Too Wide, Wrong Lane)*
43 Fail to Signal For Turn or Stop
45 Fail to Yield to Emergency Vehicle
46 Fail to Yield, Generally
48 Enter Intersection when Space Insufficient
49 Turn, Yield, Signaling Violations, Generally

*RULES OF THE ROAD – WRONG SIDE, PASSING & FOLLOWING*

51 Driving Wrong Way on One-Way Road
52 Driving On Left, Wrong Side of Road, Generally
53 Improper, Unsafe Passing
54 Pass on Right *(Drive Off Pavement To Pass)*
55 Pass Stopped School Bus
56 Fail to Give Way When Overtaken
58 Following Too Closely
59 Wrong Side, Passing, Following Violations, Generally

*RULES OF THE ROAD – LANE USAGE*

61 Unsafe or Prohibited Lane Change
62 Improper Use of Lane *(Enter of 3-Lane Road, HOV Designated Lane)*
63 Certain Traffic to Use Right Lane *(Trucks, Slow-Moving, etc.)*
66 Motorcycle Lane Violations *(More than Two per Lane, Riding Between Lanes, etc.)*
67 Motorcyclist Attached to Another Vehicle
69 Lane Violations, Generally

*NON-MOVING – LICENSE AND REGISTRATION VIOLATIONS*

71 Driving While License Withdrawn *(Including Violation of Provisions of Work Permit)*
71 Driving While License Withdrawn
72 Other Driver License Violations
73 Commercial Driver Violations *(Log Book, Hours, Permits Carried)*
74 Vehicle Registration Violations
75 Fail to Carry Insurance Card
76 Driving Uninsured Vehicle
79 Non-Moving Violations, Generally

## D21 Violations Charged *(continued)*

*EQUIPMENT*

81 Lamp Violations
82 Brake Violations
83 Failure to Require Restraint Use *(By Self or Passengers)*
84 Motorcycle Equipment Violations *(Helmet, Special Equipment)*
85 Violation of Hazardous Cargo Regulations
86 Size, Weight, Load Violations
89 Equipment Violations, Generally

*LICENSE, REGISTRATION & OTHER VIOLATIONS*

91 Parking
92 Theft, Unauthorized Use of Motor Vehicle
93 Driving Where Prohibited *(Sidewalk, Limited Access, Off Truck Route)*
95 No Driver Present / Unknown if Driver Present
97 Not Reported
98 Other Moving Violation *(Coasting, Backing, Opening Door)*
99 Unknown Violation(s)

## The VISION Data File

The Vision data file identifies each visual obstruction as a separate record. That is, there can be more than one vision record for each driver. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, and VEH_NO, which are described in the beginning of the Data Element Definitions and Codes section. The data file also contains MVISOBSC which is described below.

CASENUM, VEH_NO, and MVISOBSC are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Vision data file with drivers from the Vehicle data file.

## PC14 Driver's Vision Obscured By

**Definition:** This data element records impediments to this driver's visual field that were noted in the police crash report.

**Additional Information:**

**SAS Name: MVISOBSC**

**Attribute Codes**

***2016-Later***

| | |
|---|---|
| 0 | No Obstruction Noted |
| 1 | Rain, Snow, Fog, Smoke, Sand, Dust |
| 2 | Reflected Glare, Bright Sunlight, Headlights |
| 3 | Curve, Hill, or Other Roadway Design Feature |
| 4 | Building, Billboard, or Other Structure |
| 5 | Trees, Crops, Vegetation |
| 6 | In-Transport Motor Vehicle *(Including Load)* |
| 7 | Not-in-Transport Motor Vehicle *(Parked, Working)* |
| 8 | Splash or Spray of Passing Vehicle |
| 9 | Inadequate Defrost or Defog System |
| 10 | Inadequate Vehicle Lighting System |
| 11 | Obstruction Interior to Vehicle |
| 12 | External Mirrors |
| 13 | Broken or Improperly Cleaned Windshield |
| 14 | Obstructing Angles on Vehicle |
| 95 | No Driver Present/Unknown if Driver Present |
| 97 | Vision Obscured – No Details |
| 98 | Other Visual Obstruction |
| 99 | Unknown Whether Vision was Obstructed |

## The NMCRASH Data File

The Nmcrash data file identifies each non-motorist action or circumstance that may have contributed to the crash as a separate record. That is, there can be more than one contributing circumstance record for each non-motorist. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, VEH_NO, and PER_NO, which are described in the beginning of the Data Element Definitions and Codes section. The data file also contains MTM_CRSH which is described below.

CASENUM, PER_NO, and MTM_CRSH are the unique identifiers for each record. CASENUM, VEH_NO, and PER_NO should be used to merge the Nmcrash data file with non-motorists from the Person data file. VEH_NO equals 0 for all records in this data file.

## NM12 Non-Motorist Contributing Circumstances

**Definition:** This data element describes the action(s) and/or circumstances of this non-motorist that law enforcement indicated may have contributed to the crash.

**Additional Information:** It selects all that apply. This data element is based on the judgment of the law enforcement officer investigating the crash.

**SAS Name: MTM_CRSH**

**Attribute Codes**

***2016-Later***

0 None Noted
1 Dart-Out
2 Failure to Yield Right-Of-Way
3 Failure to Obey Traffic Signs, Signals or Officer
4 In Roadway Improperly *(Standing, Lying, Working, Playing)*
5 Entering/Exiting Parked or Stopped Vehicle
6 Inattentive *(Talking, Eating, etc.)*
7 Improper Turn/Merge
8 Improper Passing
9 Wrong-Way Riding or Walking
10 Riding on Wrong Side of Road
11 Dash
12 Improper Crossing of Roadway or Intersection *(Jaywalking)*
13 Failing to Have Lights on When Required
14 Operating Without Required Equipment
15 Improper or Erratic Lane Changing
16 Failure to Keep in Proper Lane or Running Off Road
17 Making Improper Entry to or Exit from Trafficway
18 Operating in Other Erratic, Reckless, Careless or Negligent Manner
19 Not Visible *(Dark Clothing, No Lighting, etc.)*
20 Passing with Insufficient Distance or Inadequate Visibility or Failing to Yield to Overtaking Vehicle
21 Other
99 Unknown

## The NMIMPAIR Data File

The Nmimpair data file identifies each non-motorist impairment as a separate record. That is, there can be more than one impairment record for each non-motorist. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, VEH_NO, and PER_NO, which are described in the beginning of the Data Element Definitions and Codes section. The data file also contains NMIMPAIR which is described below.

CASENUM, PER_NO, and NMIMPAIR are the unique identifiers for each record. CASENUM, VEH_NO, and PER_NO should be used to merge the Nmimpair data file with non-motorists from the Person data file. VEH_NO equals 0 for all records in this data file.

## NM14 Condition (Impairment) at Time of Crash- Non-Motorist

**Definition:** This data element identifies physical impairments to this non-motorist that may have contributed to the crash as identified by law enforcement.

**Additional Information:**

**SAS Name:** **NMIMPAIR**

**Attribute Codes**

| *2016* | *2017-Later* | |
|---|---|---|
| 0 | 0 | None/Apparently Normal |
| 1 | 1 | Ill, Blackout |
| 2 | 2 | Asleep or Fatigued |
| 3 | 3 | Walking with a Cane or Crutches, etc. |
| 4 | -- | Paraplegic or Restricted to Wheelchair |
| -- | 4 | Paraplegic or in a Wheelchair |
| 5 | 5 | Impaired Due to Previous Injury |
| 6 | 6 | Deaf |
| 7 | 7 | Blind |
| 8 | 8 | Emotional *(Depressed, Angry, Disturbed, etc.)* |
| 9 | 9 | Under the Influence of Alcohol, Drugs or Medication |
| 10 | 10 | Physical Impairment – No Details |
| 96 | 96 | Other Physical Impairment |
| 98 | 98 | Not Reported |
| 99 | 99 | Unknown if Impaired |

## The NMPRIOR Data File

The Nmprior data file identifies each non-motorist action at the time of their involvement in the crash as a separate record. That is, there can be more than one action record for each non-motorist. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSUSTRAT, PSU_VAR, REGION, URBANICITY, WEIGHT, VEH_NO, and PER_NO, which are described in the beginning of the Data Element Definitions and Codes section. The data file also contains MPR_ACT which is described below.

CASENUM, PER_NO, and MPR_ACT are the unique identifiers for each record. CASENUM, VEH_NO, and PER_NO should be used to merge the Nmprior data file with non-motorists from the Person data file. VEH_NO equals 0 for all records in this data file.

## NM11 Non-Motorist Action/Circumstances

**Definition:** This data element describes the action(s) of the non-motorist immediately prior to their involvement in the crash.

**Additional Information:** It is also an indication of whether the non-motorist was walking/cycling to/from school in addition to the action of the non-motorist immediately prior to their involvement in the crash.

**SAS Name: MPR_ACT**

**Attribute Codes**

***2016-Later***

1 Going to or from School *(K-12)*
2 Waiting to Cross Roadway
3 Crossing Roadway
4 Jogging/Running
5 Movement Along Roadway with Traffic *(In or Adjacent to Travel Lane)*
6 Movement Along Roadway Against Traffic *(In or Adjacent to Travel Lane)*
8 In Roadway-Other *(Working, Playing, etc.)*
9 Adjacent to Roadway *(e.g., Shoulder, Median)*
10 Working in Trafficway *(Incident Response)*
11 Entering/Exiting a Parked or Stopped Vehicle
12 Disabled Vehicle Related *(Working on, Pushing, Leaving/Approaching)*
14 Other
16 Movement Along Roadway – Direction Unknown
98 Not Reported
99 Unknown

## The SAFETYEQ Data File

The Safetyeq data file includes non-motorist safety equipment. It contains the data elements CASENUM, PSU, PJ, STRATUM, PSU_VAR, REGION, URBANICITY, WEIGHT, VEH_NO, and PER_NO, which are described in the beginning of the Data Element Definitions and Codes section. The data file also contains the data elements on the following pages.

CASENUM and PER_NO are the unique identifiers for each record. CASENUM, VEH_NO, and PER_NO should be used to merge the Safetyeq data file with non-motorists from the Person data file. VEH_NO equals 0 for all records in this data file.

Prior to 2017, the Safetyeq data file identified each item of safety equipment as a separate record. That is, there could be more than one safety equipment record for each non-motorist. The data element that captured each item of safety equipment was MSAFEQMT. This element has been moved to the Discontinued Safetyeq Data Elements.

## NM13 Non-Motorist Safety Equipment Use

### NM13A Non-Motorist Helmet Use

**Definition:** This data element indicates if the non-motorist was wearing a safety helmet.

**Additional Information:** This includes all helmets (e.g., bicycle helmet, motorcycle helmet, racing helmets, etc.).

**SAS Name:** **NMHELMET**

**Attribute Codes**

***2017-Later***

1 No
2 Yes
8 Not Reported
9 Unknown

### NM13B Non-Motorist Use of Protective Pads

**Definition:** This data element indicates if the non-motorist was wearing padded, shaped attachments to protect specific areas of the body (elbows, knees, shins, etc.) from injury.

**Additional Information:**

**SAS Name:** **NMPROPAD**

**Attribute Codes**

***2017-Later***

1 No
2 Yes
8 Not Reported
9 Unknown

### NM13C Non-Motorist Use of Other Protective Safety Equipment

**Definition:** This data element indicates if the non-motorist was using protective safety equipment other than a helmet or pads (e.g., eye wear/face shields, gloves, wrist guards, etc.).

**Additional Information:**

**SAS Name:** **NMOTHPRO**

**Attribute Codes**

***2017-Later***

1 No
2 Yes
8 Not Reported
9 Unknown

## NM13D Non-Motorist Use of Reflective Clothing/Carried Item

**Definition:** This data element indicates if the non-motorist was wearing or carrying some type of reflective item (e.g., jacket, backpack, vest, etc.).

**Additional Information:**

**SAS Name:** NMREFCLO

**Attribute Codes**

***2017-Later***

1 No
2 Yes
8 Not Reported
9 Unknown

## NM13E Non-Motorist Use of Lighting

**Definition:** This data element indicates if the non-motorist was using a light on his/her person or on a pedalcycle or personal conveyance for safety purposes, to include flashlights.

**Additional Information:**

**SAS Name:** NMLIGHT

**Attribute Codes**

***2017-Later***

1 No
2 Yes
8 Not Reported
9 Unknown

## NM13F Non-Motorist Use of Other Preventive Safety Equipment

**Definition:** This data element indicates if the non-motorist was using preventive safety equipment other than a reflective clothing/carried item or light (e.g., bicycle reflectors and flags, reflectors and triangles on a buggy, hi-glo orange clothing, rollerblade stoppers, etc.).

**Additional Information:**

**SAS Name:** NMOTHPRE

**Attribute Codes**

***2017-Later***

1 No
2 Yes
8 Not Reported
9 Unknown

# Discontinued SAFETYEQ Data Elements

## Non-Motorist Safety Equipment Use (discontinued)

**Definition:** This data element indicates the safety equipment that was used by this non-motorist involved in the crash.

**Additional Information:** There can be one or more safety equipment responses for each non-motorist.

**SAS Name: MSAFEQMT**

**Attribute Codes**

***2016***

1 None Used
2 Helmet
3 Reflective Clothing *(Jacket, Backpack, etc.)*
4 Protective Pads *(Elbows, Knees, Shins, etc.)*
5 Lighting
7 Other Safety Equipment
8 Not Reported
9 Unknown if Used

## The VINDECODE Data File

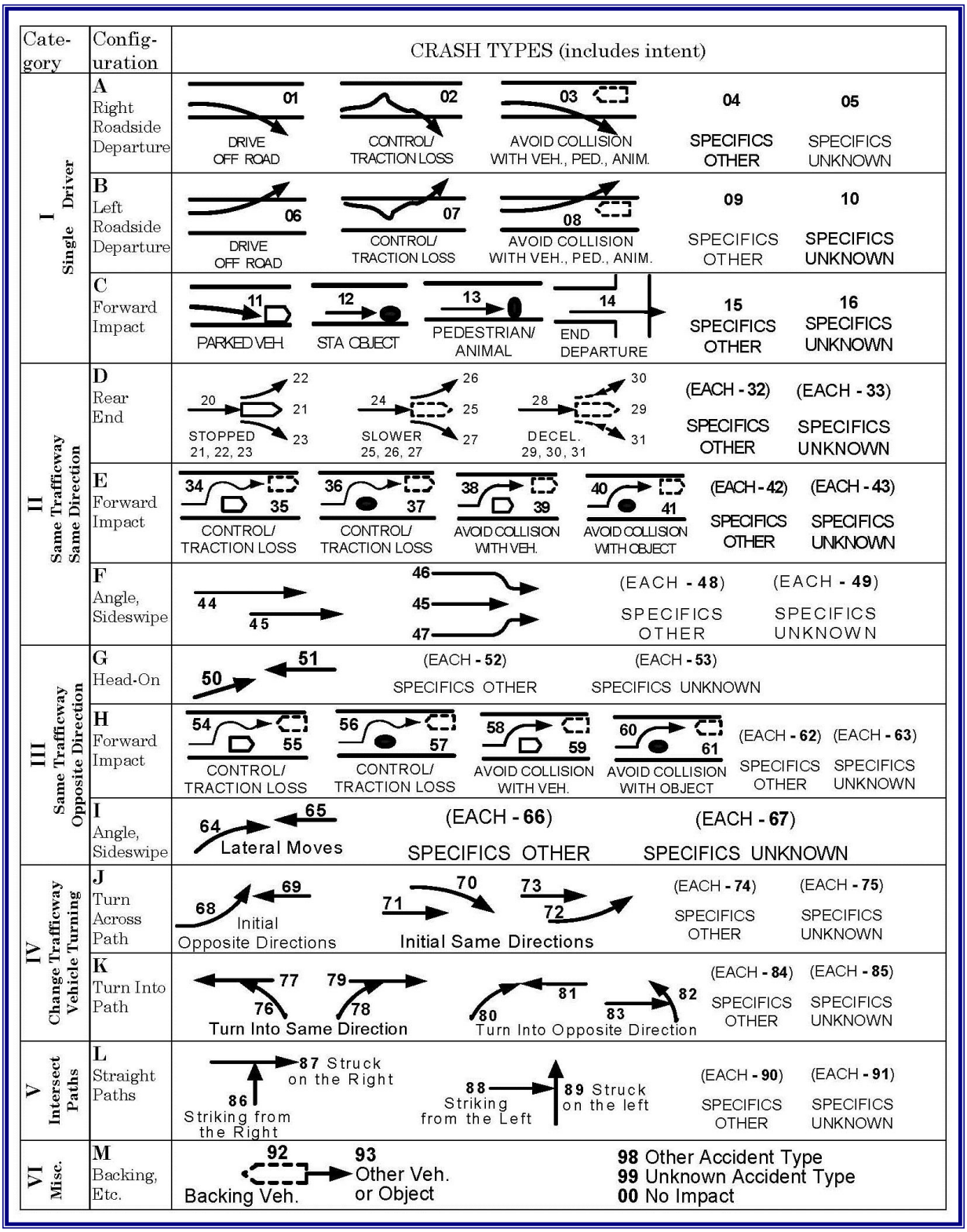
The Vindecode data file provides vehicle specification data for all vehicle types, mainly passenger vehicles, trucks and motorcycles. It contains the data elements CASENUM and VEH_NO, which are described in the beginning of the Data Element Definitions and Codes section. CASENUM and VEH_NO are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Vindecode data file with the Vehicle or Parkwork data file.

The Vindecode data file contains over 100 data elements derived from the VIN using the R L Polk VIN verification and decoding program, VINtelligence. Descriptions of the data elements and their contents can be found in the Polk VINtelligence Deluxe Package and Field Descriptions documentation in Appendix G: VIN Decoded Data Elements.

The data file also includes the data element FLAG. This element identifies if the VIN used to decode the data is from the NASS GES original source data or obtained from Polk by linking NASS GES license plate data.

# Appendices

# Appendix A:
# PC23 Crash Type Diagram



# Appendix B: Summary Statistics

The following two tables provide a summary of descriptive statistics from the CRSS data files. Table 1: Unweighted Sample represents the actual number of records and Table 2: Weighted Sample represents the national estimates. These statistics provide the analyst a benchmark to compare against numbers obtained from the analytical data files.

***Table 1: Unweighted Sample***

| Year | Crashes | Vehicles (In-Transport) | People | Drivers | Occupants | Pedestrians | Pedalcyclists |
|---|---|---|---|---|---|---|---|
| **2016** | 46,511 | 82,149 | 117,759 | 82,000 | 113,405 | 2,257 | 1,576 |
| **2017** | 54,969 | 97,625 | 138,913 | 97,388 | 133,408 | 2,881 | 1,946 |

***Table 2: Weighted Sample***

| Year | Crashes | Vehicles (In-Transport) | People | Drivers | Occupants | Pedestrians | Pedalcyclists |
|---|---|---|---|---|---|---|---|
| **2016** | 6,821,129 | 12,094,306 | 16,617,091 | 12,074,087 | 16,386,624 | 95,492 | 69,929 |
| **2017** | 6,452,285 | 11,547,079 | 15,758,853 | 11,521,902 | 15,557,000 | 78,671 | 55,067 |

Drivers: PERSON TYPE = 1
Occupants: PERSON TYPE IN (1,2,9)
Pedestrians: PERSON TYPE = 5
Pedalcyclists: PERSON TYPE IN (6, 7)

# Appendix C:
# Standard Errors

The estimates generated using CRSS data are subject to sampling errors because they are based on a probability sample of crashes instead of all crashes. The sampling error is a measure of the variability of an estimator from its mean under repeated sample selections. The magnitude of sampling error depends on the study variable, the estimator used, and the CRSS sample design.

For various reasons, it is necessary to use design features such as stratification, clustering, and unequal selection probabilities to select the CRSS probability sample. As a result, the CRSS sample is not a simple random sample. Failing to consider these design features in estimation can cause bias to both CRSS point estimates and the associated standard error estimates.

Estimation methods and computer software have been developed to make estimates from complex survey data like CRSS. Specialized procedures for complex survey data analysis, such as SAS PROC SURVEY procedures and SUDAAN procedures, should be used for CRSS data analysis along with proper design statements. A SAS PROC SURVEY procedure and a SUDAAN procedure are provided below as examples of CRSS estimation. See the NHTSA Technical Report "NHTSA's New Crash Report Sampling System (CRSS): Design Overview and Analytic Guidance" for some basic concepts of complex survey data analysis and more examples.

### SAS and SUDAAN Examples for Single Year CRSS Estimation

```
/*SAS Example*/
PROC SURVEYFREQ DATA=IMPUTED.ACCIDENT VARMETHOD=JK;
      STRATA PSUSTRAT;
      CLUSTER PSU_VAR;
      TABLES MAXSEV_IM;
      WEIGHT WEIGHT;
      RUN;

/*SUDAAN Example*/
PROC CROSSTAB DATA=IMPUTED.ACCIDENT DESIGN=JACKKNIFE NOTSORTED;
      NEST PSUSTRAT PSU_VAR;
      WEIGHT WEIGHT;
      TABLES MAXSEV_IM;
      CLASS MAXSEV_IM;
      PRINT NSUM="SAMSIZE" WSUM="POPSIZE" SEWGT;
      RUN;
```

While the illustrations above are the preferred way to generate standard errors of estimates, NHTSA has also published the Generalized variance function (GVF) method in the past in the GES Analytic User's Manual.

The GVF provides a framework to generate ballpark standard error estimates for a large quantity of estimates in a simpler way. In this approach, it is assumed that in CRSS, the standard error (SE) of a point estimate $x$ can be approximated by a function of $x$:

$$SE \approx e^{a+b*ln^2(x)}$$

To estimate the $a$ and $b$ in the approximation equation, first a group of point estimates ($x$'s) and their associated standard error estimates (SE's) are made from the CRSS sample using specialized software such as SAS PROC SURVEY procedures or SUDAAN procedures. These point estimates and associated standard error estimates are then used to find the best $a$ and $b$ for the approximation. Once the best $a$ and $b$ are estimated, they are plugged back into the above approximation equation to make a ballpark standard estimate for any point estimate $x$.

NHTSA will issue updates to the GVF upon completion of the analysis required to generated the function parameters discussed above.

# Appendix D:
# Analytical Classification of
# Select CRSS Data Elements

Several data elements in the CRSS are classified or collapsed according to analytical needs. In various NCSA's published reports and analysis, select CRSS data elements have been given a standard classification. This section shows how CRSS data elements are classified, assisting users in understanding and duplicating statistics presented in NCSA's published reports.

For analytical purposes, fatal crashes and fatalities are extracted from the Fatality Analysis Reporting System (FARS), not CRSS. FARS contains data on a census of fatal traffic crashes within the 50 states, the District of Columbia, and Puerto Rico. To be included in FARS, a crash must involve a motor vehicle traveling on a trafficway customarily open to the public and result in the death of a person (occupant of a vehicle or non-motorist) within 30 days of the crash. Since FARS contains records on all fatal crashes, it's a more accurate representation of fatal crashes and fatalities than the sample contained in CRSS.

It is important to note that these are NCSA's classifications and are subject to modification.

The following tables show the specific coding schemes of select CRSS data elements that are used in NCSA's publications and analysis:

## Time of Day / Day of Week

| Classification | Data Year and Code |
|---|---|
| | 2016-Later |
| **Time of Day** | **HOUR (Military)** |
| Daytime (6:00 a.m. – 5:59 p.m.) | 6-17 |
| Nighttime (6:00 p.m. – 5:59 a.m.) | 0-5, 18-24* |
| Unknown | 99 |
| **Day of Week** | **WKDY_I w/ HOUR_I** |
| Weekday<br>6 a.m. Monday thru 5:59 p.m. Friday | (WKDY_I =2 and 6<=HOUR_I<=23) or<br>(WKDY_I in (3,4,5)) or<br>(WKDY_I =6 and (0<= HOUR_I <=17 or HOUR_I=24*)) |
| Weekend<br>6 p.m. Friday thru 5:59 a.m. Monday | (WKDY_I =6 and 18<= HOUR_I <=23) or<br>(WKDY_I in (1,7)) or<br>(WKDY_I =2 and (0<= HOUR_I <=5 or HOUR_I=24*)) |
| Unknown | NA |

* Hour 24 is the beginning of the day.

Return

## Vehicle Body Type

| Classification | Data Year and Code |
|---|---|
| | 2016-Later |
| Passenger Cars | 01-11, 17 |
| Light Trucks & Vans | 14-16, 19-22, 28-41, 45-49 |
| Large Trucks | 60-63, 64, 66, 67, 68, 71, 72, 78 |
| Motorcycles[1] | 80-89 |
| Buses | 50-59 |
| Other/Unknown Vehicles | 12, 13, 42, 65, 73, 90-97, 98 |
| Passenger Vehicles | 01-11, 14-22, 28-41, 45-49 |
| Utility Vehicles (a.k.a. On/Off Road) | 14-16, 19 |
| Pickups[2] | 30-39 |
| Vans | 20, 21, 22, 28, 29 |
| Medium Trucks | 60-62, 64, 67, 68, 71 |
| Heavy Trucks | 63, 66, 72, 78 |
| Combination Trucks | ( 60-63, 64, 67, 68, 71, 72, 78 and TOW_VEH in (1-4) ) or 66 |
| Single Unit Trucks | 60-63, 64, 67, 68, 71, 72, 78, 79 and TOW_VEH in (0, 5, 6, 9) |
| Unknown (not in Imputed Body Type) | 98, 99 |

(1) In 2017, new attributes were added to the motorcycle range: motor scooter (84); unenclosed three wheel motorcycle / unenclosed autocycle (1 rear wheel) (85); enclosed three wheel motorcycle / enclosed autocycle (1 rear wheel) (86); unknown three wheel motorcycle type (87).

(2) In 2017, attributes compact pickup (30) and standard pickup (31) were deleted and replaced with attribute light pickup (34).

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## Traffic Control Device

| Classification | Data Year and Code |
|---|---|
| | 2016-Later |
| None | 0 |
| Traffic Signal | 01, 04, 08, 09 |
| Stop Sign | 21 |
| Other | 22,23,28,29,<br>40-43,49,51,61,62,97,98 |

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**Injury Severity**

| CRSS Description | Data Year and Code | Classification |
|---|---|---|
| | 2016-Later | |
| No Apparent Injury (O) | 0 | Not Injured |
| Died Prior | 6 | |
| Possible Injury (C) | 1 | Injured |
| Suspected Minor Injury (B) | 2 | |
| Suspected Serious Injury (A) | 3 | |
| Unknown Injury Severity (U) | 5 | |
| Fatal (K)* | 4 | Killed |

* Fatality counts from the FARS are used in NCSA's publications and analysis.

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## Person Type

| CRSS Description | Data Year and Code | Classification |
|---|---|---|
| | 2016-Later | |
| ***Occupants*** | | |
| Driver of a motor vehicle in-transport | 01 | Driver |
| Passenger of a motor vehicle in-transport | 02 | Passenger |
| Unknown occupant type of a motor vehicle in-transport (1) | 09 | Passenger |
| ***Non-occupants*** | | |
| Occupant of a motor vehicle not in-transport (2) | 03 | Other non-occupant |
| Occupant of a non-motor vehicle transport device (3) | 04 | Other non-occupant |
| Pedestrian | 05 | Pedestrian |
| Bicyclist | 06 | Pedalcyclist |
| Other Cyclist | 07 | Pedalcyclist |
| Persons on personal conveyances | 08 | Other non-occupant |
| Persons in/on buildings | 10 | Other non-occupant |
| Unknown type of non-occupant | 19 | Unknown non-occupant type |

(1) Customarily, "Unknown Occupant" is placed in the "Passenger" category, unless they need to be distinguished from "Passengers".

(2) "Occupant of motor vehicle not in-transport" refers to occupants of parked motor vehicles (any motor vehicle stopped off the roadway). This includes occupants of motor vehicles in motion outside the trafficway boundaries.

(3) "Occupant of non-motor vehicle transport device" refers to persons riding in an animal-drawn conveyance, on an animal, or injured occupants of railway trains, etc.

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## Restraint System Use

The restraint use classification should be used for all vehicle occupants, except for motorcyclists. However, most restraint use analysis focuses on child safety seat use or belt use for passenger vehicle occupants. Be sure to include the appropriate vehicle body type occupied in your selection criteria - see the section on *Vehicle Body Type Classification*.

| CRSS Description | Data Year and Code | | Classification |
|---|---|---|---|
| | 2016 | 2017-Later | |
| Not Applicable | 0 | -- | Not Used |
| None Used – Motor Vehicle Occupant | 7 | -- | |
| None Used/Not Applicable | -- | 20 | |
| No Helmet | 17 | 17 | |
| DOT-Compliant Motorcycle Helmet | 5 | 5 | |
| Helmet, Other than DOT-Compliant Motorcycle Helmet | 16 | 16 | |
| Helmet, Unknown if DOT-Compliant | 19 | 19 | |
| Shoulder and Lap Belt Used | 3 | 3 | Used |
| Shoulder Belt Only | 1 | 1 | |
| Lap Belt Only | 2 | 2 | |
| Child Restraint System – Forward Facing | 10 | 10 | |
| Child Restraint System – Rear Facing | 11 | 11 | |
| Booster Seat | 12 | 12 | |
| Child Restraint – Type Unknown | 4 | 4 | |
| Other Restraint/ Safety Equipment Used | 97 | 97 | |
| Restraint Used – Type Unknown | 8 | 8 | |
| Not Reported | 98 | 98 | Unknown |
| Unknown If Helmet Worn | 29 | 29 | |
| Unknown If Used | 99 | 99 | |

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## Helmet Use

The helmet use classification should be used for motorcyclists only. Be sure to include the appropriate vehicle body type occupied in your selection criteria - see the section on *Vehicle Body Type Classification*.

| CRSS Description | Data Year and Code | | Classification |
|---|---|---|---|
| | 2016 | 2017-Later | |
| Not Applicable | 0 | -- | Not Helmeted |
| None Used – Motor Vehicle Occupant | 7 | -- | |
| None Used/Not Applicable | -- | 20 | |
| Shoulder And Lap Belt Used | 3 | 3 | |
| Shoulder Belt Only | 1 | 1 | |
| Lap Belt Only | 2 | 2 | |
| Child Restraint System – Forward Facing | 10 | 10 | |
| Child Restraint System – Rear Facing | 11 | 11 | |
| Booster Seat | 12 | 12 | |
| Child Restraint – Type Unknown | 4 | 4 | |
| No Helmet | 17 | 17 | |
| Helmet Used Improperly | (5, 16, 19) and REST_MIS=1 | (5, 16, 19) and REST_MIS=1 | |
| Restraint Used – Other or Type Unknown | (8, 97) and REST_MIS=1 | (8, 97) and REST_MIS=1 | |
| DOT-Compliant Motorcycle Helmet | 5 and REST_MIS=0 | 5 and REST_MIS=0 | Helmeted |
| Other/Unknown Helmet | (16, 19) and REST_MIS=0 | (16, 19) and REST_MIS=0 | |
| Other Restraint/ Safety Equipment Used | 97 and REST_MIS=0 | 97 and REST_MIS=0 | |
| Restraint Used – Type Unknown | 8 and REST_MIS=0 | 8 and REST_MIS=0 | |
| Not Reported | 98 | 98 | Unknown |
| Unknown If Helmet Worn | 29 | 29 | |
| Unknown If Used | 99 | 99 | |

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## Alcohol Test Result

| CRSS Description | Data Year and Code | Classification | |
|---|---|---|---|
| | 2016-Later | | |
| .00 - Actual Value | 0-9 | No Alcohol | Tested with Known Results |
| .01-.93 – Actual Value | 10-939 | Positive BAC | |
| .94 or Greater | 940 | | |
| Positive Reading with No Actual Value | 998 | | |
| None Given | 996 | Not Tested | Unknown BAC |
| AC Test Performed, Results Unknown | 997 | Tested, with Unknown Results | |
| Unknown if Tested / Not Reported | - | Unknown if Tested | |
| Unknown if Tested | 999 | | |
| Not Reported | 995 | | |

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# Appendix E:
# Rules for Derived Data Elements

Several derived data elements are included in the data files. A derived data element is any element that is not coded (i.e., data directly entered into the system) but translated from existing data. Derived data elements include:

- translations from coded data elements (e.g., "Driver Drinking in Vehicle")
- translations from collected information (e.g., "Urbanicity"),
- records counted from vehicle and person levels as crash level counters (e.g., "Number of Parked/Working Vehicles"),
- data extracted across several records (e.g., "First Harmful Event"), and
- element combinations (e.g., "Motor Carrier Issuing Authority and ID Number").

The derived data elements are provided to facilitate analyses and as a common platform for presenting findings. These elements and the translations used to derive them are described in this Appendix.

## Crash Level Counts

### Number of Motor Vehicles in Transport (MVIT)

Accident. VE_FORMS

(also provided as Vehicle.VE_FORMS, Parkwork.PVE_FORMS, Person.VE_FORMS)

Logic of Derivation

All Vehicle records linked to the crash are used. This data element is derived as the count of all vehicles in the crash where "Unit Type" = 1. It is the number of records in the Vehicle data file.

---

### Number of Parked/Working Vehicles

Accident. PVH_INVL

Logic of Derivation

All Vehicle records linked to the crash are used. This data element is derived as the count of all vehicles in the crash where "Unit Type" is in (2, 3 or 4). It is the number of records in the Parkwork data file.

---

### Number of Persons in Motor Vehicles in Transport (MVIT)

Accident. PERMVIT

Logic of Derivation

All Person records linked to the crash are used. This data element is derived as the count of all persons in the crash where "Person Type" is in (1, 2 or 9).

---

### Number of Persons Not in Motor Vehicles in Transport (MVIT)

Accident. PERNOTMVIT

Logic of Derivation

All Person records linked to the crash are used. This data element is derived as the count of all persons in the crash where "Person Type" is in (3, 4, 5, 6, 7, 8, 10 or 19).

## Crash and Vehicle Level Derived Data Elements

### Maximum Injury Severity in Crash

Accident.MAX_SEV

| Attribute Labels | 2016-Later |
|---|---|
| No Apparent Injury | 0 |
| Possible Injury | 1 |
| Suspected Minor Injury | 2 |
| Suspected Serious Injury | 3 |
| Fatal | 4 |
| Injured, Severity Unknown | 5 |
| Died Prior to Crash | 6 |
| No person involved in the Crash | 8 |
| Unknown if Injured/ Not Reported | 9 |

Logic of Derivation

All Person records linked to the crash are used. If there are no records, then the value 8 is assigned. If there is a single record, then the SAS code for Person.INJ_SEV is used. If there are multiple records, all SAS codes for Person.INJ_SEV are obtained and prioritized. Follow the priority ranking of each attribute as follows: 4, 3, 2, 1, 5, 0, 6, 9.

**Maximum Injury Severity in Vehicle**

Vehicle.MAX_VSEV

| Attribute Labels | 2016-Later |
|---|---|
| No Apparent Injury | 0 |
| Possible Injury | 1 |
| Suspected Minor Injury | 2 |
| Suspected Serious Injury | 3 |
| Fatal | 4 |
| Injured, Severity Unknown | 5 |
| Died Prior to Crash | 6 |
| No person in Vehicle | 8 |
| Unknown if Injured/ Not Reported | 9 |

Logic of Derivation

All Person records linked to the vehicle are used. If there are no records, then the value 8 is assigned. If there is a single record, then the SAS code for Person.INJ_SEV is used. If there are multiple records, all SAS codes for Person.INJ_SEV are obtained and prioritized. Follow the priority ranking of each attribute as follows: 4, 3, 2, 1, 5, 0, 6, 9.

### Number Known Injured in Crash

Accident.NUM_INJ

| Attribute Labels | 2016-Later |
|---|---|
| No Person Injured/Property Damage Only Crash | 0 |
| Number of Known Injured | x |
| No Person involved in the Crash | 98 |
| All Persons in Crash are Unknown If Injured | 99 |

Logic of Derivation

All Person records linked to the crash are used. If there are no records, then the value 98 is assigned. If the SAS code for Person.INJ_SEV is 9 for all persons in the crash, then the value is 99. If not, the value assigned is the number (count) of Person records where the SAS code for Person.INJ_SEV is between 1 and 5.

---

### Number Injured in Vehicle

Vehicle.NUM_INJV

| Attribute Labels | 2016-Later |
|---|---|
| No Person Injured in Vehicle | 0 |
| Number of Known Injured | 1-97 |
| No Person involved in the Vehicle | 98 |
| All Persons in Vehicle are Unknown If Injured | 99 |

Logic of Derivation

All Person records linked to the vehicle are used. If there are no records, then the value 98 is assigned. If the SAS code for Person.INJ_SEV is 9 for all persons in the vehicle, then the value is 99. If not, the value assigned is the number (count) of Person records where the SAS code for Person.INJ_SEV is between 1 and 5.

## Alcohol Involved in Crash

Accident.ALCOHOL

| Attribute Labels | 2016-Later |
|---|---|
| Alcohol Involved | 1 |
| No Alcohol involved | 2 |
| No applicable person | 8 |
| Unknown | 9 |

Alcohol Involved in Crash is derived based on Police-Reported Alcohol Involvement from the Person data file as follows:

### Police Reported Alcohol Involvement

| Attribute Labels | 2016-Later |
|---|---|
| No (Alcohol Not Involved) | 0 |
| Yes (Alcohol Involved) | 1 |
| Not Reported | 8 |
| Unknown (Police-Reported) | 9 |

Logic of Derivation

Alcohol Involved in Crash is calculated based on drivers and non-motorists [except occupants of motor vehicles not in-transport] in the crash and are referred to here as "involved active participants". This translates to Person Type NOT in 2, 3, or 9.

The following order of alcohol involvement is used. The SAS value for the case was determined by:

- 1 (Alcohol Involved)
  If "Police Reported Alcohol Involvement" is 'Yes' for any of the involved active participants in the crash,
  Then Alcohol Involved in Crash should be 1 (Alcohol Involved).
- 2 (No Alcohol Involved)
  If "Police Reported Alcohol Involvement" is 'No' for ALL of the involved active participants in the crash,
  Then Alcohol Involvement in Crash should be 2 (No Alcohol Involved).
- 9 (Unknown)
  If NOT #1 (Alcohol Involved) and "Police Reported Alcohol Involvement" is 'Unknown' or 'Not Reported' for ANY of the involved active participants,
  Then Alcohol Involvement in Crash should be 9 (Unknown).
- 8 (No Applicable Person)
  Default value if no active participants coded for this case.

Examples:

*Case 1:* *V1 Driver- alcohol is no,V2 Driver- alcohol is unknown, one non-motorist- alcohol is no,V3 with the situation that three unknown occupants with none coded the role of driver- alcohol for occ1 is yes, alcohol for occ2 is no, occ3 for alcohol is unknown.*
Alcohol Involved in Crash is 9 (Unknown).

*Case 2:* *V1 driver, alcohol is unknown, one non-motorist, alcohol is no,*
Alcohol Involved in Crash is 9 (Unknown).

*Case 3:* *V1 driver, alcohol is no, one non-motorist, alcohol is unknown,*
Alcohol Involved in Crash is 9 (Unknown).

Note: For a single vehicle crash, if an in-transport vehicle is listed as having a driver present, but no occupant is coded with the role of driver, then Alcohol Involved in Crash equals 9 (Unknown) unless all occupants are coded 'no (alcohol not involved)' or all the occupants are coded 'yes (alcohol involved).' In the case where all occupants are coded 'No (Alcohol Not Involved)' then Alcohol Involved in Crash is 2 (No Alcohol Involved). In the case where all occupants are coded 'Yes (Alcohol Involved)' then Alcohol Involved in Crash is 1 (Alcohol Involved). In the case where not all occupants are coded 'Yes' or 'No', then Alcohol Involved in Crash equals 9 (Unknown).

For a multi-vehicle crash or a crash having non-motorists, the highest priority alcohol value in each vehicle in the case and each applicable non-motorist is taken.

## Driver Drinking in Vehicle

Vehicle.VEH_ALCH

| Attribute Labels | 2016-Later |
|---|---|
| Alcohol Involved | 1 |
| No Alcohol involved | 2 |
| No Driver Present/Unknown if Driver Present | 8 |
| Unknown | 9 |

Logic of Derivation

- If "Driver Presence" equals 0 (No Driver Present/Not Applicable) or 9 (Unknown), Then "Driver Drinking in Vehicle" is set to 8 (No Driver Present/Unknown if Driver Present).
- If "Driver Presence" equals 1 (Yes) and there is a person in the vehicle where "Person Type" equals 1 (Driver of a Motor Vehicle In Transport),
  Then "Police-Reported Alcohol Involvement" for the driver is used for the derivation of "Driver Drinking in Vehicle" as follows:

| Police-Reported Alcohol Involvement | | Driver Drinking in Vehicle | |
|---|---|---|---|
| ▪ 0 No (Alcohol Not Involved) | → | 2 | No Alcohol Involved |
| ▪ 1 Yes (Alcohol Involved) | → | 1 | Alcohol Involved |
| ▪ 8 Not Reported | → | 9 | Unknown |
| ▪ 9 Unknown (Police-Reported) | → | 9 | Unknown |

- If "Driver Presence" equals 1 (Yes) and there is ***not*** a person in the vehicle where "Person Type" equals 1 (Driver of a Motor Vehicle In-Transport),
  Then
  - If "Police Reported Alcohol Involvement" is the same for the occupants of the vehicle where "Person Type" equals 9 (Unknown Occupant Type in a Motor Vehicle In Transport),
    Then "Driver Drinking in Vehicle" is derived from "Police Reported Alcohol Involvement" as shown above,
  - Else "Driver Drinking in Vehicle" is set to 9 (Unknown).

Example:

*V1 Driver- alcohol is no, V2 Driver- alcohol is unknown, one non-motorist- alcohol is no, V3 (driver present) with the situation that three unknown occupants with none coded the role of driver- alcohol for occ1 is yes, alcohol for occ2 is no, occ3 for alcohol is unknown.*

Driver Drinking in Vehicle for V1 is 2 (No Alcohol Involved), for V2 is 9 (Unknown), for V3 is 9 (Unknown).

Note: If an in-transport vehicle is listed as having a driver present, but no occupant is coded with the role of driver, then Driver Drinking in Vehicle equals 9 (Unknown) unless all the unknown occupant types (PER_TYP=9) are coded 'no (alcohol not involved)' or all the unknown occupant types are coded 'yes (alcohol involved).' In the case where all the unknown occupant types are coded 'No (Alcohol Not Involved)' then Driver Drinking in Vehicle is 2 (No Alcohol Involved). In the case where all the unknown occupant types are coded 'Yes (Alcohol Involved)' then Driver Drinking in Vehicle is 1 (Alcohol Involved). For example, if there is a vehicle where there is a driver present and there are two unknown occupant types, both coded 'Yes (Alcohol Involved)' but neither is coded as the driver; then Driver Drinking in Vehicle equals 1 (Alcohol Involved). Another example: if there is a vehicle where there is a driver present and there are two unknown occupant types (neither coded as the driver--that is, the police report indicates it is unknown who was actually driving), and one is coded 'Yes (Alcohol Involved)' and the other is coded 'No (Alcohol Not Involved)'; then Driver Drinking in Vehicle equals 9 (Unknown).

**Atmospheric Conditions**

Accident.WEATHER

| Attribute Labels | 2016-Later |
|---|---|
| No Additional Atmospheric Conditions | 0 |
| Clear | 1 |
| Rain | 2 |
| Sleet or Hail | 3 |
| Snow | 4 |
| Fog, Smog, Smoke | 5 |
| Severe Crosswinds | 6 |
| Blowing Sand, Soil, Dirt | 7 |
| Other | 8 |
| Cloudy | 10 |
| Blowing Snow | 11 |
| Freezing Rain or Drizzle | 12 |
| Not Reported | 98 |
| Unknown | 99 |

Logic of Derivation

This data element is derived from the coded data elements, Accident.WEATHER1 and Accident.WEATHER2. To derive WEATHER from these two data elements, the priority ranking of each attribute is as follows:

- Snow
- Blowing Snow
- Sleet or Hail
- Freezing Rain or Drizzle
- Rain
- Fog, Smog, Smoke
- Severe Crosswinds
- Blowing Sand, Soil, Dirt
- Other
- Cloudy
- Clear
- Not Reported
- Unknown
- No Additional Atmospheric Conditions

### Region of the Country

Accident.REGION

Logic of Derivation

This element is derived from the data element "Primary Sampling Unit (PSU)" where the crash occurred. The country is divided into four regions with each of the 50 states and the District of Columbia falling into one of the regions. Region of the Country, therefore, is based on the state in which the Primary Sampling Unit is located.

---

### Urbanicity

Accident.URBANICITY

Logic of Derivation

This element is derived from the data element "Primary Sampling Unit (PSU)" where the crash occurred. A PSU is considered Urban if the county (or counties) in the PSU has a population of 250,000 or greater, otherwise it is Rural.

---

### Primary Sampling Unit for Variance Estimation

Accident.PSU_VAR

Logic of Derivation

This element is derived from the data elements "Primary Sampling Unit (PSU)" and "Police Jurisdiction" where the crash occurred.

### First Harmful Event

Accident.HARM_EV
(also provided as Vehicle.HARM_EV, Parkwork.PHARM_EV, Person.HARM_EV)

Logic of Derivation

This data element is derived from the set of all crash events. Each event in a crash is recorded in chronological order. The data element that records the event is "Sequence of Events" and includes both harmful and non-harmful events. First Harmful Event, therefore, is the first "Sequence of Events" value that is not between codes 60 and 71 (non-harmful events).

---

### Initial Contact Point

Vehicle. IMPACT1, Parkwork.PIMPACT1
(also provided as Person.IMPACT1)

Logic of Derivation

This data element is derived from the set of all crash events for a vehicle. Each event in a crash is recorded in chronological order. The data element that records each impact for a vehicle is "Area of Impact (This Vehicle)" ) for "This Vehicle" or "Area of Impact (Other Vehicle)" for the "Other Vehicle". The area of impact is only coded for harmful events, that is "Sequence of Events" values that are not between codes 60 and 71. Initial Contact Point, therefore, is the vehicle's first recorded Area of Impact value for a harmful event. Note that the vehicle may be "This Vehicle" or the "Other Vehicle" in the crash event.

---

### Make Model Combined

Vehicle. MAK_MOD, Parkwork. PMAK_MOD
(also provided as Person. MAK_MOD)

Logic of Derivation

This 5-digit data element is the combination of two data elements, the 2-digit "Vehicle Make" code followed by the 3-digit "Vehicle Model" code.

---

### Motor Carrier Identification Number

Vehicle. MCARR_ID, Parkwork. PMCARR_ID

Logic of Derivation

This 11-character data element is the combination of two data elements, the 2-digit "Motor Carrier Issuing Authority" code followed by the 9-character "Identification Number".

# Appendix F:
# Analysis of Pedestrian and Bicycle Crashes Around Intersections

When using the Accident, Person, and Pbtype data files to study pedestrian and cyclist crashes, care must be taken when describing their locations in and around intersections.

The Accident data file contains the data element, "Relation to Junction-Specific Location." This element identifies the location of the "First Harmful Event" of the crash and not necessarily the location of any pedestrian or bicyclist involved. In addition, this element's attributes have specific definitions for *Intersection* (in the intersection) and *Intersection-Related*.

The Person data file contains the data element, "Non-Motorist Location at Time of Crash." This element employs the defined concepts of *At Intersection* and *Not at Intersection*, but does not include the concept of *Intersection-Related*.

Finally, the Pbtype data file contains the data elements, "Crash Location – Pedestrian," "Crash Location – Bicycle," "Pedestrian Position," and "Bicyclist Position." These elements employ the defined concepts of *At Intersection*, *Not at Intersection*, and *Intersection Related* (defined somewhat differently from the Accident file concept).

The following graphics may be helpful aids in conjunction with the FARS/CRSS Coding and Validation Manual and the Pedestrian-Bicyclist Crash Typing Manual:

# Intersection Cheat Sheet

## C21b RELATION TO JUNCTION

### 02 (Intersection)

**02 (Intersection)** is used when the first harmful event occurs in an area which:

(1) contains a crossing or connection of two or more roadways not classified as a driveway access, **and**

(2) is embraced within the prolongation of the lateral curb lines or, if none, the lateral boundary lines of the roadways.

### 03 (Intersection-Related)

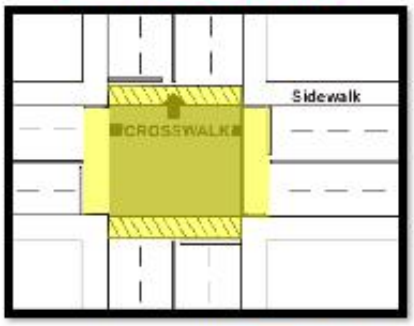
**03 (Intersection-Related)** means that the first harmful event:

(1) occurs on an approach to or exit from an intersection **and**

(2) results from an activity, behavior or control related to the movement of traffic units through the intersection.

## NM10 NON-MOTORIST LOCATION AT TIME OF CRASH

### AT INTERSECTION



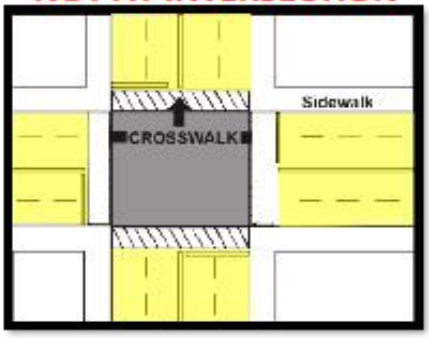

**"At intersection"** means: The person is on a roadway (travel lane) either

(1) in the intersection,

(2) in an area between a crosswalk and the perimeter of the intersection, **or**

(3) in a crosswalk (whether marked or unmarked) adjacent to an intersection. If there are no crosswalks, "at intersection" means only the intersection, which is the area embraced within the prolongation of the lateral curb lines or, if none, the lateral boundary lines of the roadways.

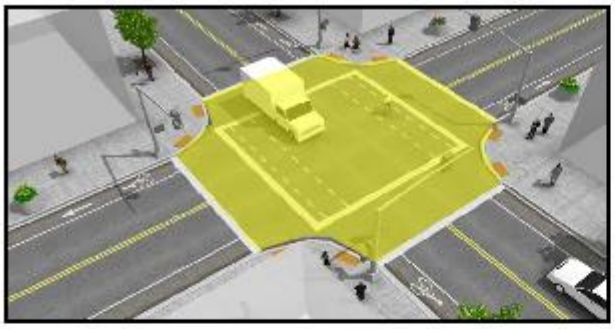
### NOT AT INTERSECTION




The person is on a roadway, but not "At Intersection".

## PB31/PB31b Pedestrian/Bicycle Crash Location

### AT INTERSECTION



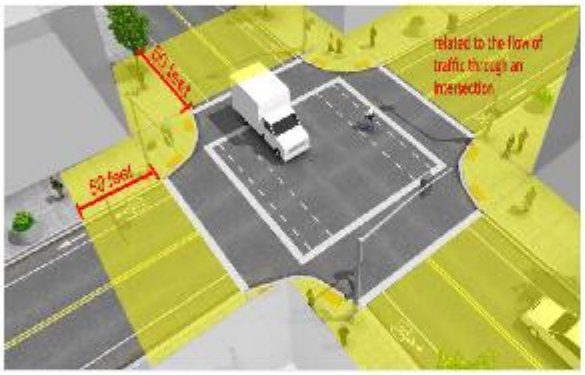
**1 (At Intersection)** is used when a person is on a roadway (travel lane) either

(1) in the intersection,

(2) in an area between a crosswalk and the perimeter of the intersection, **or**

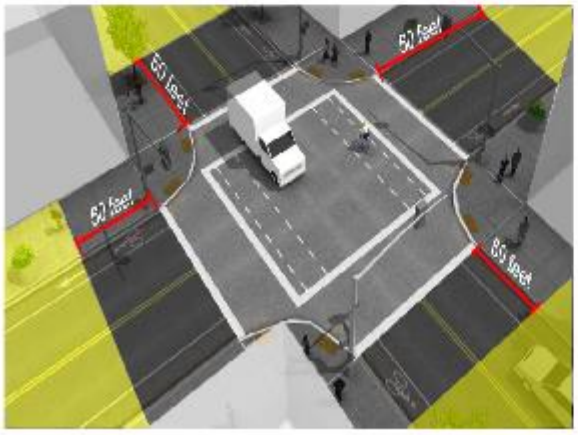
(3) in a crosswalk (whether marked or unmarked) adjacent to an intersection.

### INTERSECTION RELATED




**2 (Intersection-Related)** is used when a person is within the trafficway 50 feet out from the perimeter of an "At intersection" area including the entire cross section of the trafficway (e.g., medians, turn lanes, bike lanes, parking lanes, shoulders, sidewalks, etc.) **OR** the crash is related to the flow of traffic through an intersection (e.g., the result of queuing traffic).

### NOT AT INTERSECTION




**3 (Not At Intersection)** is used when a person is within the trafficway more than 50 feet out from the perimeter of an "At Intersection" area **AND** the crash is not identified as related to the movement of the traffic units through an intersection.

This includes the entire cross section of the trafficway (e.g., medians, turn lanes, bike lanes, parking lanes, shoulders, sidewalks, etc.).

This attribute is the default when the case materials give no indication that the crash is within 50 feet of an intersection.

# Appendix G:
# VIN Decoded Data Elements

The Vindecode data file contains over 100 data elements decoded from the VIN. Descriptions of these data elements are provided below from the Polk VINtelligence Deluxe Package and Field Descriptions documentation.

| Element Identifier | SAS Name | Field Description |
|---|---|---|
| V200 | ABS | (Brakes- ABS Code) A code that describes whether a vehicle has or does not have anti-lock brakes, and what kind of brakes they are. (Not coded for heavy truck). This is based on the series code that is assigned the vehicle from VINA. |
| V201 | ABS_T | (Brakes- ABS Code) description |
| V202 | BATKWRTG | The measure of total battery power expressed in kilowatts. For example: 71KW, 85KW, 75KW, 67KW. |
| V203 | BATTYP | A value that identifies the kind of battery in the vehicle. For example: PbA- Lead Acid, NMH- Nickel Metal Hydride. |
| V204 | BATTYP_T | The description of the Polk assigned code for the Battery Type Code. For example: PbA- Lead Acid, NMH- Nickel Metal Hydride. |
| V205 | BATVOLT | The voltage rating of the battery as provided by the manufacturer. |
| V206 | BLOCKTYPE | (Block Type) Description |
| V207 | BODYSTYL | A Polk assigned code that describes the body style of the vehicle. For example, CP=Coupe. |
| V208 | BODYSTYL_T | The description of the Polk assigned code Body Style Code For example: Coupe |
| V209 | CARBBRLS | The number of barrels on a carbureted engine. |
| V210 | CARBTYPE | Carburetion types include "Carburetor", "Fuel Injection", N/A |
| V211 | CARBTYPE_T | The description of the Polk assigned code which identifies the vehicle carburetion type. For example Carburetor, Fuel Injection, Unknown or Electric. |
| V212 | CYCLES | (Cycle Count) Refers to the cycle or stroke of an engine. 2-strokes are lightweight and simpler, but they burn oil, by design. Few cars on the road in North America are two-strokes, the last one offered was a 1967 Saab. |
| V213 | CYLNDRS | Contains a code that represents the number of cylinders a vehicle's combustion engine can have. |
| V214 | DISPCLMT | (Displacement Liters) displacement in rounded Liters, where 1,000 cubic centimeters = 1 liter. Even domestic makes will advertise displacement in terms of liters (e.g. 5.0 liter mustang, which equates to a 302 CID or 4967 cc displacement). |
| V215 | DISPLCC | (Displacement CC) displacement in cubic centimeters. We intend to use this as the definitive, exact displacement value, i.e. 4967 cc. |
| V216 | DISPLCI | (Displacement CID) displacement in cubic inches. This is a rounded, marketing value, like 302 cubic inches, instead of 4967 cc. |
| V217 | DOORS | The number of doors the vehicle has |
| V218 | DRIVETYP | (Drive Type) This element describes type of driving configuration for cars and trucks such as FWD, AWD, RWD. |
| V219 | DRIVETYP_T | (Drive Type) description |
| V220 | DRIVWHLS | Number of wheels driven by the power train. For example in a 6x4 configuration this would be the 4. |
| V221 | DRL | (Daytime Running Lights)A Polk assigned code that identifies whether or not the vehicle has daytime running lights. |

| Element Identifier | SAS Name | Field Description |
|---|---|---|
| V222 | DRL_T | (Daytime Running Lights) description |
| V223 | ENGHEAD | (Head Configuration) Describes the cylinder head's camshaft/valve configuration. |
| V224 | ENGHEAD_T | (Head Configuration) description |
| V225 | ENGMFG | (Mfr.) A Polk assigned code given to the original equipment manufacture of the within a vehicle |
| V226 | ENGMFG_T | (Mfr.) description |
| V227 | ENGMODEL | (Model) description |
| V228 | ENGVINCD | (Code) Code derived from the VIN (not the secondary VIN for a motorcycle). Usually a single character, some manufactures give full positions 4-8 and engine information from that; they do not break it down any further. |
| V229 | ENGVVT | Used to determine if a car has Variable Valve Timing |
| V230 | FUEL | (Fuel) What an internal combustion burns to move a piston in a cylinder |
| V231 | FUEL_T | (Fuel) description |
| V232 | FUELINJ | The type of fuel injection |
| V233 | FUELINJ_T | The type of fuel injection used by a vehicle. For example, Direct, Throttle body |
| V234 | GVWRANGE | Contains a code that identifies the Polk standard groupings of gross vehicle weights to which a vehicle may belong. This information is typically captured only for trucks. |
| V235 | GVWRANGE_T | The description for the manufacturers assigned Gross Vehicle Weight (GVW) for trucks. This rating may or may not equal the actual GVW. |
| V236 | INCOMPLT | Indicator that signifies whether the vehicle is consider "incomplete" (Y/N) |
| V237 | MCYUSAGE | A further breakdown of body style for motorcycles to indicate if is it On-Road or Off-Road. |
| V238 | MCYUSAGE_T | A further breakdown of body style for motorcycles to indicate if is it On-Road or Off-Road. |
| V239 | MFG | (Vehicle Manufacturer Name) Standard abbreviation of the name of the vehicle manufacturer, i.e. General Motors, as defined by the National Crime Information Center |
| V240 | MFG_T | (Vehicle Manufacturer Name) The name of the vehicle manufacturer, i.e. General Motors, as defined by the National Crime Information Center |
| V241 | MSRP | Contains the base price of the vehicle as designated by the OEM's specifications. BASE PRICE includes only the price for the base model of the vehicle, excluding any optional equipment that may have been added as a result of the vehicle's TRIM LEVEL. |
| V242 | NCICMAKE | Contains the Polk standardized abbreviation for the OEM's vehicle make. The vehicle make generally contains what the general public usually considers to be a vehicle brand name, for example, Chrysler, Dodge, Ford, Mercury, Toyota, GMC, Chevy, etc. |
| V243 | ORIGIN | (Origin) A code that indicates the origin of a vehicle. |
| V244 | ORIGIN_T | (Origin) description |
| V245 | PLANT | (Plant Code) Plant code where vehicle was manufactured. |
| V246 | PLNTCITY | (City) This is the city where the plant is located. |
| V247 | PLNTCTRY | A code representing the country the plant is in. |
| V248 | PLNTCTRY_T | (Country) This is the country where the plant is located. Example values are USA, Canada and Japan. |

| Element Identifier | SAS Name | Field Description |
|---|---|---|
| V249 | PLNTSTAT | A code representing the state or province the plant is in. |
| V250 | PLNTSTAT_T | (State or Province) This is the state or province (Canada) location of the plant. |
| V251 | PSI_F | (Front Tire Pressure) Vehicle Mfr. recommendation for tire pressure, in pounds/sq. in. |
| V252 | PSI_R | (Rear Tire Pressure) Vehicle Mfr. recommendation for tire pressure, in pounds/sq. in. |
| V253 | REARSIZE | The size of the rear tires. example "17R245" |
| V254 | REARSIZE_T | (Rear Tire Size Description) As in "17R245" |
| V255 | RSTRNT | (Restraint Type) A Polk assigned code that identifies the type of restraints that a vehicle has based on VIN. |
| V256 | RSTRNT_T | (Restraint Type) description |
| V257 | SALECTRY | (Country Sold / Specific Market) Country where the vehicle is planned to be sold (may have different emissions standards). |
| V258 | SALECTRY_T | (Country Sold / Specific Market) description |
| V259 | SECURITY | (Security Type) Describes the security system (if any) installed on this model. |
| V260 | SECURITY_T | (Security Type) description |
| V261 | SEGMNT | The Polk standard segmentation code |
| V262 | SEGMNT_T | Description of SEGMENTATION_CODE that represents the Polk Standard Segmentation applied. |
| V263 | SHIPWEIGHT | Contains the base weight of the vehicle, rounded to the nearest one hundred pounds, as defined in the OEM's specifications. The base weight of a vehicle is the empty weight of the base model of the vehicle (i.e., the stripped down version of the vehicle) |
| V264 | SUPCHRGR | Indicates if the engine has a supercharger or not. |
| V265 | SUPCHRGR_T | Indicates if the engine has a supercharger or not. Yes, No or Unknown. |
| V266 | TIREDESC_F | (Front Tire) More specific tire description (ex. Michelin Eagle P245/40ZR)" |
| V267 | TIREDESC_R | (Rear Tire) More specific tire description (ex. Michelin Eagle P245/40ZR)" |
| V268 | TIRESZ_F | Describes the size of the front tire. For example "17R245" |
| V269 | TIRESZ_F_T | (Front Tire Size Description) As in "17R245" |
| V270 | TKAXLEF | (Axle- Type, Front Axle) The location of the front axle of a truck tractor. Set forward increases stability on the highway, Setback increases maneuverability in tight spaces. |
| V271 | TKAXLEF_T | (Axle- Type, Front Axle) short description |
| V272 | TKAXLER | (Axle- Type, Rear Axle) Represents rear axle configuration on a truck tractor. Tandem axles increase load bearing capability. |
| V273 | TKAXLER_T | (Axle- Type, Rear Axle) short description |
| V274 | TKBEDL | (Bed Length) Code representing the manufacturer's description of the relative size of the cargo area of a pickup truck or van. A "long" Ford Ranger bed (compact pickup) may well be shorter than a "short" bed on an F350 (large industrial pickup). |
| V275 | TKBEDL_T | (Bed Length) description |
| V276 | TKBRAK | (Brake Type) The type of brakes on the Vehicle (currently commercial truck only). Truck VIN determines this currently |
| V277 | TKBRAK_T | (Brake Type) description |

| Element Identifier | SAS Name | Field Description |
|---|---|---|
| V278 | TKCAB | (Cab Configuration) Cab Type describes the physical configuration of a truck's cabin. |
| V279 | TKCAB_T | (Cab Configuration) medium description |
| V280 | TKDUTY | (Duty Type) A Polk assigned code that represents the duty type of a truck engine, based on manufacturer information. |
| V281 | TKDUTY_T | (Duty Type) medium description |
| V282 | TONRATING | (Tonnage Rating) description |
| V283 | TURBO | Indicates if the engine has a turbocharger. |
| V284 | TURBO_T | Indicates if the engine has a turbocharger. Yes, No or Unknown. |
| V285 | VEHTYPE | A Polk assigned code that defines the type of a vehicle represented by a specific VIN. For example: M,P,C or T. |
| V286 | VEHTYPE_T | The description of the Polk assigned code for the vehicle type code. For example: passenger, truck, motorcycle, commercial trailer. |
| V287 | VINMAKE_T | (Make- Name) Full name of the make (i.e. Chevrolet) |
| V288 | VINMODEL_T | (Model Code) description |
| V289 | VINTRIM_T | The Trim of the vehicle |
| V290 | VINTRIM1_T | The trim of the vehicle. This field is used when a VIN Pattern could have more than 1 trim assigned. |
| V291 | VINTRIM2_T | The trim of the vehicle. This field is used when a VIN Pattern could have more than 2 trims assigned. |
| V292 | VINTRIM3_T | The trim of the vehicle. This field is used when a VIN Pattern could have more than 3 trims assigned. |
| V293 | VINTRIM4_T | The trim of the vehicle. This field is used when a VIN Pattern could have more than 4 trims assigned. |
| V294 | VINYEAR | The marketing year defined by the OEM within which the vehicle was produced. The value contained in this attribute may not always match the calendar year in which the vehicle was actually manufactured. Many OEMs release models prior to calendar year. |
| V295 | VLVCLNDR | (Valves Per Cylinder) Number of intake/exhaust valves per cylinder. |
| V296 | VLVTOTAL | (Valves Total) Total number of intake/exhaust valves. |
| V297 | WHEELS | The number of wheel ends on the vehicle. For example in a 6x4 configuration this would be the 6. |
| V298 | WHLBLG | Contains the longest distance between the front and rear axles of a vehicle in inches for a particular series of that vehicle. |
| V299 | WHLBSH | Contains the distance between the front and rear axles of a vehicle in inches of the base model of the vehicle. |

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