

### (33) Relation to Roadway Surface

The location of the first harmful event (at the crash level) as it relates to its position within or outside the traffiicway

## 1 On Roadway (Surface) Off Roadway

- 2 Shoulder
- 3 Median
- 4 Roadside
- 5 Outside Trafficway
- 6 Unknown

## (34) Vision Obstruction

- 0 None
- 1 Vehicle window(s) obscured
- 2 Trees, crops, brush, etc. 3 Building(s)
- 4 Embankment

- 5 Sign(s) 6 Hillcrest
- 7 Parked vehicle(s)
- 8 Vehicle(s) in traffic/moving
- 9 Blinded, headlights 10 Blinded, sunlight
- 11 Blinded, other lights
- 12 Other\*
- 13 Unknown

## (35) Physical Condition

- 1 Apparently normal
- 2 Illness 3 Fatique
- 4 Fell asleep, fainted, loss
- of consciousness 5 Impairment due to medica-
- tions, drugs, alcohol 6 Medical condition
- 7 Other physical impairment
- 8 Restriction not complied with

time of the crash for transport.

- 9 Other
- 10 Unknown

## (36) Driver License Restrictions

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

Indicate restrictions shown on the Driver's License. For out-of-state drivers, write out the restriction.

## (37) Alcohol/Drugs Suspected

- 1 Yes alcohol, impairment suspected
- 2 Yes alcohol, no impairment
- detected
- 3 Yes other drugs, impairment suspected
- 4 Yes other drugs, no impairment
- detected 5 Yes - alcohol and other drugs.
- impairment suspected alcohol and other drugs,
- no impairment detected
- 7 Unknown

## (38) Alcohol/Drugs

- Test Status 0 No test
- 1 Alcohol test
- 2 Test for other drugs 3 Alcohol & other drugs test
- 4 Test refused
- 5 Unknown

## (39) Alcohol/Drugs Test Results

- 0 No test
- 1 No alcohol or other drugs
- 2 Alcohol (percent BAC)
- 3 Other drugs reported 4 Contaminated sample/unusable
- 5 Pending 6 Unknown

## (40) Vehicle Seizure (DWI)

Check this box if the crash involves alcohol or other drugs in sufficient amount to constitute a DWI, and the vehicle is "seized.

## (41) Vehicle Style (Type)

- Passenger car
- 2 Pickup 3 Light truck (mini-van, panel)
- 4 Sport utility 5 Van
- 6 Commercial bus
- 7 School bus 8 Activity bus
- 9 Other bus
- 10 Single unit truck (2-axle, 6-tire) 11 Single unit truck (3 or more axles)
- 12 Truck/trailer
- 13 Truck/tractor (i.e., bobtail) 14 Tractor/semi-trailer
- 15 Tractor/doubles 16 Unknown heavy truck
- 17 Taxicab
- 18 Farm equipment 19 Farm tractor
- 20 Motorcycle 21 Moped
- 22 Motor scooter or motor bike
- 23 Pedalcycle
- 24 Pedestrian
- 25 Motor home/recreational vehicle
- 26 Other\*
- 27 All terrain vehicle (ATV)
- 28 Firetruck
  29 EMS Vehicle, Ambulance, Rescue Squad
- 30 Military
- 31 Police
- 32 Unknown 33 Autocycle

## (42) Vehicle Drivable

Vehicle is disabled by damage severe enough to prevent driving it. For comparison purposes, this data element could be used as a minimum reporting threshold for "property damage only" crashes.

## (43) TAD

## Damaged Areas

- Front concentrated
- Front distributed FI Front left corner
- Front right corner
- RC. Rear concentrated
- Rear distributed BD Rear left corner
- BR Rear right corner
- LP Left side (door)
- RP Right side (door) I FO Left side front quarter
- Right side front quarter
- LBQ Left side rear quarter
- Right side rear quarter RBQ חו Left side distributed
- RD Right side distributed
- L&T Left side & top (rollover)
- R&T Right side & top (rollover)
- TOP Top UND Underneath
- ND No Damage
- Unknown

## **Extent of Deformity**

The Severity of Damage is based on a scale of "0" being no damage and "7" being the most severe damage

## (44) Estimated Damage

Dollar estimate of the cost to restore the vehicle to its condition just prior to the crash, or the estimated value of the vehicle before the crash. whichever is less. For a "totaled" vehicle, enter a dollar estimate of the retail value of the vehicle prior to the crash. Do not enter the word "totaled".

A vehicle being towed by another is part of the towing vehicle and its damage should be included in the "Parts Damaged" and "Amount of Damage" categories.

## (45) Cargo Body

- Type
  1 Bus (seats for 16 or more,
- including driver)
  2 Bus (seats for less than 16,
- including driver)
- 3 Van/enclosed box
- 4 Grain/chips/gravel truck 5 Pole truck
- 6 Cargo tank
- 8 Dump 9 Concrete mixer
- 10 Auto transporter 11 Garbage/refuse
- 12 Log truck
- 13 Other\*
- 14 Intermodal Cargo Container

## (46) Name of EMS

Record the name of the EMS (or EMS unit number if available) that responded to the crash. A letter designation, unique to each injured person is provided in the first column of the Occupant and Non-Motorist Section. This unique identifier must precede the name of the EMS for each injured person being transported.

Example: A - Cumberland County Ambulance

## (47) Injured Taken by EMS to

Record the destination of the injured person preceded by the unique letter designation (from the first column) for the person involved, if they were taken to a hospital, clinic, doctor's office, or other place of emergency medical aid. Include both name of

treatment facility and city or town. Example: A - N.C. Memorial, Chapel Hill; B - Duke Hospital, Durham, etc.

## · · · · · · · KEY DEFINITIONS · · · ·

CRASH/MOTOR VEHICLE/UNIT A motor vehicle crash is any event that results in death, injury or property damage attributable directly to a motor vehicle or its load in transport, but not involving aircraft or watercraft. It must occur on a trafficway or after the motor vehicle runs off the roadway but before events are stabilized.

A motor vehicle is any mechanically or electrically powered device, not operated on rails, upon which any person or property may be transported or

drawn upon a highway. A unit is any motor vehicle, pedestrian, pedalcyclist, moped or other road vehicle, excluding railway vehicles, which can be shown on the report as "other" RR train.

**DRIVERLESS MOTOR VEHICLE** A driverless motor vehicle, though previously parked, or a motor vehicle out of control while being towed or pushed, is considered to be a motor vehicle in transport. Also, an abandoned motor vehicle, upon a roadway, is considered to be a motor vehicle in transport. This principle does not apply to such devices as farm or industrial machinery, highway graders, construction machinery, or similar devices which are not in use at the

HIT & RUN A hit & run vehicle is one which was involved in the crash as the "striking vehicle" or as the "vehicle struck" but which left the scene. The appropriate box must be checked, e.g., vehicle 1, vehicle 2, etc. and any information that is known, included in the Driver and/or Vehicle areas

## NON-CONTACT VEHICLE OR NON-MOTORIST

Non-contact phantom motor vehicles or non-motorists are units that caused the crash but left the scene. They should not be counted in the number of units, but should be referred to in the narrative.

Non-contact motor vehicles or non-motorists are units that caused the crash and remained at the scene They should be counted as units with identifying information, and referred to in the narrative. A school bus could be an example of a non-contact vehicle that is related to a crash (refer to data element #68).

## **SCHOOL BUS**

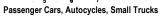
A motor vehicle used for the transportation of any school pupil at or below the 12th-grade level to or from a public or private school or school-related

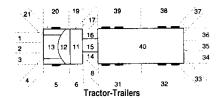
A school bus must be externally identifiable by the color yellow, the words "school bus", flashing red lights located on the front and rear, and identifying lettering on both sides indicating the school or school district served, or the company operating the bus

## **MOTOR VEHICLE STATUS**

The use of the device at the time of the crash is the primary criterion for establishing motor vehicle status. For example:

- A registered motor vehicle is being drawn by a team of horses on a city street; it is considered
- other road vehicle A registered motor vehicle is being used to draw a plow engaged in breaking ground on a farm; it is considered farm machinery while
- engaged in plowing. A registered truck is engaged in spreading 3. concrete at a road construction site; it is
- construction machinery. A motorized highway grader, under its own power, is moving from one work place to another on a public way; it is considered a
- motor vehicle in transport. A registered truck, with a blade attached, is engaged in plowing snow from a trafficway; it is considered road maintenance machinery.
- A riding, motorized lawn mower, under its own power, is being driven from one home to another on a city street; it is considered a
- motor vehicle in transport. A military tank is being moved, under its own power, from the firing range to the motor pool, on a land way of a military post; it is considered a motor vehicle in transport.





(62) Estimate of Speed at Impact

Estimated speed in miles per hour

for each vehicle involved in the

collision. Estimates reflect the

(63) Tire Impressions Before Impact

impressions (skid marks, tire print

yaw) for each vehicle involved in

the collision, prior to impact.

(64) Distance Traveled After Impact

a result of the force of the

(65) Emergency Vehicle Use

collision

3 Military

4 Police

5 Other

(66) Post Crash Fire

Distance (in feet) each vehicle or

pedestrian traveled after impact as

Indicates vehicles which are on an emergency

signals in use; lights, siren sounding, etc.

(67) School Bus - Contact Vehicle

involved as a contact vehicle.

If "Yes" check block. This data element is used to determine "school bus related." The school

bus, with or without a pupil on board, is directly

(68) School Bus - Noncontact Vehicle

bus, with or without a pupil on board, is indirectly involved as a noncontact vehicle.

If "Yes" check block. This data element is used

to determine "school bus related." The school

response, i.e., traveling with physical emergency

1 Firetruck 2 EMS Vehicle, Ambulance, Rescue Squad, etc.

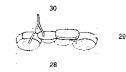
Length (in feet) of the tire

speed of each vehicle at the

moment of impact.

0 Pedestrian & Non-Contact Vehicle





Motorcycle, Bicycle, Moped or ATV

## (49) Vehicle Maneuver/Action

- 1 Stopped in travel lane
- 2 Parked out of travel lanes
- 3 Parked in travel lanes
- 4 Going straight ahead
- 5 Changing lanes or merging 6 Passing
- 7 Making right turn 8 Making left turn
- 9 Making U turn
- 10 Backing
- 11 Slowing or stopping
- 12 Starting in roadway
- 13 Parking
- 14 Leaving parked position
- 15 Avoiding object in road 16 Other\*

## (50) Non-motorist Action

- 1 Entering or crossing specified location
- 2 Walking, riding, running/jogging with traffic 3 Walking, riding, running/jogging against traffic
- 4 Working
- 5 Pushing vehicle
- 6 Approaching or leaving vehicle
- 7 Playing
- 8 Standing
- 9 Other

## (51) Non-motorist Location Prior to Crash

- 1 Marked crosswalk at intersection
- 2 At intersection but no crosswalk
- 3 Non-intersection crosswalk
- 4 Driveway access crosswalk
- 5 In roadway 6 Not in roadway
- 7 Median (but not on shoulder) 8 Island
- 9 Shoulder
- 10 Sidewalk 11 Within 10 feet of roadway (not on shoulder, median, sidewalk, island)
- 12 Beyond 10 feet of roadway (within trafficway)
- 13 Outside trafficway
- 14 Shared-use path or trails

## (52-56) VEHICLE LEVEL

### Crash Sequence of Harmful Events (First, Second, Third, Fourth), fields 52-55, and Most Harmful Event, field 56 for each Unit (Vehicle)

If a vehicle has only one event, then only one code is required. Vehicles can have up to 4 harmful events. The Most Harmful Event may or may not be one of the 4 events.

## 0 Unknown

- Non-Collision
- 1 Ran off road right 2 Ran off road left
- 3 Ran off road straight ahead
- 4 Jackknife 5 Overturn/rollover
- 6 Crossed centerline/median
- 7 Downhill runaway 8 Cargo/equipment loss or shift
- 9 Fire/explosion
- 10 Immersion
- 11 Equipment failure (tires, brakes, etc.)
- 12 Separation of units 13 Other non collision\*

### Collision of Motor Vehicle With 14 Pedestrian

- 15 Pedalcyclist
- 16 RR train, engine 17 Animal

## 18 Movable object\*

- Collision of Two or More Motor Vehicles
- 20 Parked motor vehicle
- 21 Rear end, slow or stop 22 Rear end, turn
- 23 Left turn, same roadway
- 24 Left turn, different roadways
- 25 Right turn, same roadway 26 Right turn, different roadways
- 27 Head on
- 28 Sideswipe, same direction
- 29 Sideswipe, opposite direction
- 30 Angle
- 31 Backing up
- 32 Other collision with vehicle\*

## 0 None

- 1 In road
- 2 Right of road, 0-10 ft.
- 5 Left of road, 0-10 ft.

- An underride refers to a vehicle during a crash. An override refers to a vehicle riding up over another

## (59) Vehicle Defects

- O None detected
- 3 Rear lights
- 4 Steering

Authorized speed limit for the vehicle at the time of the crash. The authorization may be indicated by the posted speed limit, blinking sign at construction zones, restricted speed for permitted vehicles

Estimated speed in miles per hour for each vehicle involved in the collision. Estimates reflect the speed of each vehicle at the moment the driver initially perceived an existing hazard.

## Collision with Fixed Object

- 34 Utility pole (with or without light)
- 35 Luminaire pole (non-breakaway)
- 36 Luminaire pole (breakaway)
- 37 Official highway sign (non-breakaway)
- 38 Official highway sign (breakaway)
- 39 Overhead sign support
- 40 Commercial sign
- 41 Guardrail end on shoulder
- 42 Guardrail face on shoulder
- 43 Guardrail end in median 44 Guardrail face in median
- 45 Shoulder barrier end (non-guardrail)
- 46 Shoulder barrier face (non-guardrail)
- 47 Median barrier end (non-guardrail)
- 48 Median barrier face (non-guardrail)
- 49 Bridge rail end 50 Bridge rail face
- 51 Overhead part of underpass 52 Pier on shoulder of underpass
- 53 Pier in median of underpass
- 54 Abutment (supporting wall) of underpass
- 55 Traffic island curb or median 56 Catch basin or culvert on shoulder
- 57 Catch basin or culvert in median 58 Ditch
- 59 Embankment
- 60 Mailbox
- 61 Fence or fence post
- 62 Construction barrier 63 Crash cushion
- 64 Other fixed object\*

## (57) Distance & Direction from Road to Object Struck

- 3 Right of road, 11-30 ft. 4 Right of road, over 30 ft.
- 6 Left of road, 11-30 ft. 7 Left of road, over 30 ft.
- 8 Straight ahead, 0-10 ft.
- 9 Straight ahead, 11-30 ft 10 Straight ahead, over 30 ft.
- (58) Vehicle Underride/Override vehicle sliding under another vehicle. Both can occur with a parked vehicle.

## Maximum of two per Vehicle

- 1 Brakes
- 2 Headlights

- 5 Tires 6 Other defects\* 7 Unknown

(60) Authorized Speed Limit

(61) Estimate of Original Speed

## (69) Road Feature

- 0 No special feature
- 1 Bridge 2 Bridge approach
- 3 Underpass
- 4 Driveway, public

## 5 Driveway, private 6 Alley intersection

- Intersection of roadways (7-12)
- 7 Four-way intersection 8 T-intersection
- 9 Y-intersection
- 10 Traffic circle/roundabout
- 11 Five-point, or more
- 12 Related to intersection 13 Non-intersection median crossing

## 14 End or beginning-divided highway

- Interchange (15-21)
- 15 Off-ramp entry
- 16 Off-ramp proper 17 Off-ramp terminal on crossroad

(70) Road Character - Horizontal

- 18 Merge lane between on and off ramp 19 On-ramp entry
- 20 On-ramp proper 21 On-ramp terminal on crossroad
- 22 Railroad crossing 23 Tunnel
- 24 Shared-use paths or trails
- and Vertical Alignment
- 1 Straight, level 2 Straight, hillcrest
- 3 Straight, grade 4 Straight, bottom (sag)
- 6 Curve, hillcrest 7 Curve, grade 8 Curve, bottom (sag)
- 5 Curve, level

## (71) Road Classification

- 1 Interstate
- 2 US Route
- 3 NC Route
- 4 State Secondary Route 5 Local Street
- 6 Public Vehicular Area 7 Private Road, Driveway

## (72) Road Surface Type

- 8 Other
- 1 Concrete 2 Grooved concrete
- 3 Smooth asphalt
- 4 Coarse asphalt
- 5 Gravel 6 Sand 7 Soil 8 Other\*

- (73) Road Configuration
- (Trafficway Description) 1 One-way, not divided
- 2 Two-way, not divided
- 3 Two-way, divided, unprotected 4 Two-way, divided, positive
- median barrier 5 Unknown
- (74) Access Control 1 No access control
- 2 Full access control 3 Partial access control
- (75) Number of Lanes Total number of lanes in both directions in the

## trafficway. If parking lot,

- (76) Traffic Control Device
- 0 No control present
- 1 Stop sign
- 2 Yield sign 3 Stop and go signal
- 4 Flashing signal with stop sign
- 5 Flashing signal without
- stop sign
- 6 RR gate and flasher 7 RR flasher 8 RR crossbucks only
- 9 Human control 10 Warning sign 11 School zone signs
- 12 Flashing stop and go signal 13 Double yellow line,

# no passing zone 14 Other\*

- (77) Traffic Control
- Operating 1 Yes 2 No

## (78 - 81) Work Zone Related

- (78) Did crash occur in or near
- 1 Construction work area 2 Maintenance work area 3 Utility work area 4 Intermittent/moving work-
- e.g., patching pothole 5 No (79) Work activity at time of crash
- 1 On going 2 No apparent activity

## (82) Trailer Type

### 0 No traile

- Non-semi trailers
- 1 Roat 2 Camper
- 3 Utility
- 4 Horse
- 5 House trailer (mobile home)

## 6 Towed vehicle 7 Other non-semi

- Semi trailers
- 8 Tanker
- 9 Enclosed van 10 Flatbed or platform

## 11 Other semi trailer 12 Double trailer

(83) Overwidth Trailer/Mobile Home Enter the number of the vehicle pulling overwidth trailer, including overwidth mobile home, followed

# by the permit number.

(84) Crash Diagram

- The diagram should include: 1 Roads and intersecting roads; if a vehicle is struck exiting a
- driveway, give the name of the business or resident 2 Direction of travel for each lane
- 3 All pertinent roadside features 4 Paths of travel for vehicles, pedestrians, bicyclists, etc. 5 Tire marks and debris 6 Measurements pertinent to the location of the point of impact.
- Use a tape for distances up to 500 feet. Use an odometer for
- greater distances For crashes within an Interchange:
- 1 Add a small line sketch of the interchange and show an "x" where the crash occurred
- 2 Sketch should be less than 25% of the total diagram area, and 3 Conform to the north arrow 4 Identify number, name of the

### road(s), ramps, and service roads shown

(85) Crash Narrative Provide a word description of events occurring prior to, during, and after the crash which are not elsewhere on the form. Note all pertinent and unusual aspects of the crash Statements made in this narrative

## (86) Additional Property

Damage

should be in the opinion of the

investigating officer.

Enter any property other than motor vehicles that was damaged, identify property and its owner and enter an estimate of the dollar damage. Damage to signs, buildings, mailboxes, fences, etc., should be entered here.

(80) Work area marked with

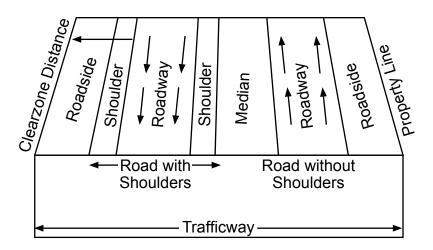
## warning signs, cones 1 Yes 2 No

(81) Location of crash

- 1 Before work area
- 2 In work area approach taper

- 3 Adjacent to actual work area

## **Trafficway**



## TRAFFICWAY DEFINITIONS

Trafficway – the entire width between property lines, or other boundary lines, of every way or place, of which any part is open to the public for purposes of vehicular travel as a matter of right or custom.

Road – that part of a trafficway which includes both the roadway and any shoulder alongside the roadway.

Roadway – that part of the trafficway designed, improved, and ordinarily used for vehicular travel. In the event the trafficway includes two or more separate roadways, the term "roadway" refers to any such roadway separately, but not to all such roadways collectively.

Traffic Lane - the specific part of the roadway that is used for vehicular travel.

Auxiliary Lane – the portion of the roadway adjoining the through traveled way for parking, speed change, turning, weaving, truck climbing, or for other purposes supplementary to through traffic movement.

Shoulder – that portion of the road contiguous with the roadway for accommodation of stopped vehicles, emergency use, and for lateral support of the roadway structure. The line between the roadway and the shoulder may be a painted edge line, a change in surface color of material, or a curb

Clearzone Distance – the total roadside border area, starting at the edge of the traveled way, available for safe use by errant vehicles. This area may consist of a shoulder, a recoverable slope, a non-recoverable slope, and/or a clear run-out area. The desired width is dependent on the traffic volumes and speeds, and roadside geometry.

Number of Lanes – the total number of thru lanes of the "road on" at the point of the collision (if two-way, total for both directions). Do not count turning lanes unless they are continuous between intersections. Enter "0" for parking lots.

Median – the portion of a divided trafficway separating the traveled way for traffic in opposing directions

Crossover – an area in the median of a divided roadway where vehicles are permitted to travel across the opposing lanes of traffic or do a U-turn.

**Driveway** – a roadway providing access to property adjacent to a trafficway.

Intersection – an area which (1) contains a crossing or connection of two or more roadways not classified as driveway access and (2) is embraced within the prolongation of the lateral curb lines or, if none, the lateral boundary lines of the roadways. Where the distance along a roadway between two areas meeting these criteria is less than 30 feet, the two areas and the roadway connecting them are considered to be parts of a single intersection.

Intersection Related – may refer to a crash that occurs within the influence area of the intersection and is caused by the operation of the intersection. The influence area is a variable distance that depends on the intersection design, traffic control and operating characteristics.

Access Control – the condition where the right of owners or occupants of abutting land or other persons to access, light, air, or view in connection with a highway is fully or partially controlled by nublic authority.

Full Access Control – authority to control access is exercised to give preference to through traffic by providing access connections with selected public roads only, by prohibiting crossings at grade or direct private driveway connections.

Railway Grade Crossing – an intersection between a roadway and train tracks which cross each other at the same level (Grade).

Highway, Street or Road – a general term denoting a public way for purpose of vehicular travel, including the entire area within the right-of-way (recommended usage: in urban areas – highway or sheet, in rural areas – highway or road).

Outside Trafficway – not physically located on any land way open to the public as a matter of right or custom for moving persons or property from one place to another.

## LOCATIONS - SPECIAL INSTRUCTIONS

Road On – Enter the class and number of the "road on", such as U.S. 13. If this road is also referred to by street, name, please list the street name in parenthesis, following the class of road and number. If a road has more than one classification or number, use the highest class with the lowest number. If the "road on" is a ramp or service road, also indicate "ramp" or "service road." The road reflected in "Road On" and Diagram must be the same.

Primary roads (I US, NC) ending with an odd number, such as "1, 3, 5, 7" are North-South roads, whereas roads ending with an even number, such as "2, 4, 6" as East-West roads, with the exception of US 220 and US 258, which are North-South roads.

Interchange Ramp – For "road on" enter the class and number of the road from which the ramp exits, followed by the word "ramp."

Railroad Crossing – Enter the number posted at the site. It is composed of six digits and a letter. It may be found strapped to a railroad signal post or part of the gate structure. If the number is not available, write in the name of the railroad company owning or operating the tracks and strike through the # on the form.

**PVA** – Public vehicular area is coded for any area generally open to and used by the public Examples include:

- College campus (not state maintained road)
- Military reservation (not state maintained road)
- Driveway to or parking lot of school, church, hospital or other facilities; service station, office building, store or other business, etc.

In the space on the form for "road on" enter PVA and place in parenthesis a brief description of where the crash occurred, name of shopping center, business, etc.

PP – Private property is coded for any private areas of non-traffic areas. In the space on the form for "road on" enter PP and place in parenthesis a brief description of name of the private drive, or other private area.

## ABBREVIATIONS FOR STREET DESIGNATORS

Word	Abbreviation	Word	Abbreviation
Alley	AL	Lane	LN
Avenue	AVE	Parkway	PKWY
Boulevard	BLVD	Place	PL
Court	CT	Road	RD
Circle	CIR	Street	ST
Drive	DR	Terrace	TER
Highway	HWY	Trail	TR

Names which <u>should not be abbreviated</u> include: Acres, Heights, Hills, Loop, Park, Plaza, Row, Saint, Square, Village Way

## GEOGRAPHIC LOCATIONS

Global Positioning System (GPS) – exact geographic location indicated in terms of latitude and longitude

Geographic Information System (GIS) – system which associates information with specific geographic locations, for example roadway characteristics by latitude/longitude.

Latitude/Longitude on the DMV-349 – for those agencies/municipalities which are able to record the latitude, longitude, and altitude (elevation) for specific crash locations, space has been provided on the form for capturing this information.

## CRASH SEQUENCE OF EVENTS, FIRST EVENT AND MOST HARMFUL EVENT

The <u>crash sequence of events</u> is a list of things that occurred to the vehicle in question that was relevant to the crash. The <u>first harmful event</u> is the injury or damage production event which characterizes the crash type. The <u>most harmful event</u> is the event which caused the most severe injury or greatest amount of property damage.

For crash sequence of events, up to four (4) harmful events may be recorded for each vehicle Involved in the crash. If only one event occurred in the crash, events 2-4 would be marked with a dash (-), not applicable.

Data elements 10-11 refer to the first harmful and most harmful events at the <u>crash level</u>, while data elements 52-56 refer to the first four harmful events (52-55) and the most harmful event (56) at the vehicle level.

It is important that these separate data elements are captured at both the vehicle and crash Levels and that a determination is made in a multi-vehicle crash, which harmful event was "first" in the crash and which was the "most harmful event". These distinctions are important in Classifying and comparing different types of crashes.

Data element values at the <u>vehicle level</u> have been expanded for "non-collision" and "fixed object" crash types, to present a greater number of categories for describing crash sequence of events.

### **COLLISION WITH FIXED OBJECT**

The following fixed object descriptions are provided as a reference to the fixed object types listed under the data elements "Sequence of Events" (#52-55) and "Most Harmful Event" (#56) for each vehicle.

**Utility Pole** – a pole or post constructed for the primary function of supporting an electric line, telephone line or other electrical-electronic transmission line or cable.

Luminaire Pole - a pole or post constructed to support a luminaire for lighting a roadway.

Official Highway Sign – a pole, post or structure constructed to support a highway sign intended to guide, or regulate or inform highway users.

**Overhead Sign Support** – a pole, post, or structure constructed to support a sign which is over a roadway (usually installed on or relocated to nearby overpasses or other structures).

Commercial Sign – a sign placed by an area business as a means of advertising. Logo signs (advertising upcoming businesses along the roadway) placed by the State DOT are not commercial signs.

Guardrail – a longitudinal barrier consisting of posts and rails or cables, whose primary functions are to prevent penetration and to safely redirect an errant vehicle away from a roadside or median hazard

Shoulder Barrier - concrete barrier or something other than a guardrail placed on the shoulder.

Median Barrier (non-guardraili) – a longitudinal barrier (such as concrete) used to prevent an errant vehicle from crossing the portion of a divided highway separating the traveled ways for traffic in opposite directions.

**Bridge Rail** – a barrier attached to a bridge deck or a bridge parapet (a low wall built along the edge of a bridge deck) to restrain vehicles, pedestrians or other users.

Overhead Part of Underpass – any part of an underpass that is over the reference or subject roadway. For a bridge, this typically refers to the beams or other structural elements supporting the bridge deck.

Bridge Pier - a support for a bridge structure other than at the ends.

Abutment (Supporting Wall) of Underpass – a structure that supports the end of a bridge.

Traffic Island - the cement or grassy area in the middle of a trafficway

Curb - a raised edge (typically less than 9 inches) or border to a roadway

Culvert - an enclosed structure providing free passage of water under a roadway.

Ditch – an open channel dug into the ground, usually paralleling the highway embankment and within the limits of the highway right-of-way.

**Embankment** – a mound of earth or stone above the original ground, built to hold back water or to support a roadway.

Construction Barrier – a traffic barrier designed to protect from entering work areas, provide protection for workers, separate two-way traffic, protect construction, and separate pedestrian and vehicular traffic.

Crash Cushion – a barrier at a spot location designed to prevent an errant vehicle from impacting a fixed object hazard by gradually decelerating the vehicle to a safe stop or by redirecting the vehicle away from the hazard.

## CHARACTERISTICS OF MOTOR VEHICLE TRAFFIC CRASHES

(According to the ANSI D161.1 Classification Manual)

Motor vehicle traffic crashes have a number of characteristics which are used to distinguish between motor vehicle traffic crashes and other events such as non-crashes, aircraft or railway crashes and other motor vehicles, cataclysms and non-traffic crashes. The questions below address all of the distinguishing characteristics of motor vehicle traffic crashes. If the answer to each of the questions below is 'yes', the incident is a motor vehicle crash.

- 1. Did the incident include one or more occurrences of injury or damage?
- Was there at least one occurrence of injury or damage which was not a direct result of a cataclysm?
- 3. Did the incident involve one or more motor vehicles?
- 4. Of the motor vehicles involved, was at least one in transport?
- 5. Was the incident an unstabilized situation?
- Did the unstabilized situation originate on a trafficway or did injury or damage occur on a trafficway?
- 7. If the incident involved a railway train in transport, did a motor vehicle in transport become involved prior to any injury or damage involving the train?
- Is it true that neither an aircraft in transport nor a watercraft in transport was involved in the incident?

### DEFINITIONS APPLYING TO MOTOR VEHICLE TRAFFIC CRASH CHARACTERISTICS

In Transport – is the state or condition of a vehicle when it is in use primarily for moving persons or property (including the vehicle itself) from one place to another, and is:

 In motion, in readiness for motion, or on a roadway, but not parked in a designated parking area.

Harmful Event - is an occurrence of injury or damage.

Cataclysm - is a cloudburst, cyclone, earthquake, flood, tornado, or volcanic eruption.

Unstabilized Situation – is a set of events not under human control. It originates when control is lost and terminates when control is regained or, in the absence of persons who are able to regain control, when all persons and property are at rest. Exclusions are:

 Deliberate Intent – suicide, homicide and other harmful events under human control do not imply the existence of an unstabilized situation. A set of unintended consequences of such acts might be an unstabilized situation.

Stabilized Situation – is the condition prevailing after motion and other action constituting the events of a crash have ceased and no further harm will ensue unless a new series of events is initiated by some means.

## **EXCLUSIONS FROM MOTOR VEHICLE TRAFFIC CRASHES**

Some injury or damage producing events involving motor vehicles in transport are motor vehicle crashes by definition, but they are not classified as motor vehicle crashes, because transport is not deemed to be the primary contributing factor to the injury or damage producing event excluded, while other parts are Included in a motor vehicle crash classification. The following examples are illustrative of the application of the exclusion principle:

- A motor vehicle in transport was washed away with a trafficway bridge during a hurricane. This crash was due to a cataclysm rather than the action of a motor vehicle in transport. However, this exclusion would not apply if the motor vehicle were driven into the water after the bridge had washed away because transport would be the primary contributing factor.
- A motor vehicle in transport was overwhelmed by a landslide or an avalanche which was a direct result of a cataclysm such as an earthquake, torrential rain, etc. However, this exclusion would not apply if a cataclysm were not in existence at the time of the event; nor would this exclusion apply if the motor vehicle were driven against any fallen materials covering a trafficway as a result of any landslide or avalanche.
- A loaded firearm was being carried in a motor vehicle in transport and it accidentally fired causing injury or damage. In such an event, transport is not considered to be the primary contributing factor; therefore, the event is not a motor vehicle crash.
- The driver of a motor vehicle in transport dies from a disease condition such as cerebral hemorrhage, heart attack or diabetic coma, prior to involvement of the motor vehicle in a motor vehicle crash. The death is due to the disease condition if it can be clearly established and not due to transport. However, to other persons, vehicles, or other property, this event, if it involved more than the death of the driver, would be a crash, and would be classified as a motor vehicle crash.
- The driver of a motor vehicle in transport suffers an epileptic seizure and the motor vehicle is involved in a motor vehicle crash. The injury or death to the driver is due to epilepsy. However, other injury or damage in the event would be classified as a motor vehicle crash
- A pregnant woman, occupying a motor vehicle in transport, gives birth to a stillborn fetus following the involvement of the motor vehicle in a motor vehicle crash. The death of the fetus is not classified as a fatal injury resulting from a motor vehicle crash.