Community Maps – Crash Flags Technical Definitions

This document provides technical definitions for the Community Maps crash flag filters to help ensure that a common set of definitions will be used across applications and businesses processes. References are provided to existing crash flags in the DT4000 crash extracts, when available. The Community Maps crash flags values have been updated as of **March 2024** to conform with the definitions in this document. In some cases, minor discrepancies may exist between Community Maps, the DT4000 crash extracts, Crash Facts, and the Year-End Crash Stats. Last Modified by Parker, 3/11/2024.

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Section 2: Community Maps Crash Flag Technical Definitions

Aggressive Driver Flag (AGGRFLAG)

Definition	Indicates whether aggressive driving was a factor in a crash based on a combination of Driver Actions at the Time of the Crash.
Crash Extracts	Not available.
2017-Present	TRUE if for any person, DRVRPC[XX] has one or more occurrences from Tier 1, two or more occurrences from Tier 2, or three or more occurrences from Tiers 2 or 3, where: Tier 1: • [117, Operated Motor Vehicle in Aggressive/Reckless Manner] Tier 2: • [101, Exceed Speed Limit] • [102, Speed Too Fast for Conditions] • [104, Following Too Close] • [113, Improper Overtaking / Passing Right] • [114, Improper Overtaking / Passing Left] • [118, Operated Motor Vehicle in Inattentive, Careless or Erratic Manner] Tier 3: • [103, Failed To Yield Right-Of-Way] • [107, Failure To Control] • [109, Disregarded Red Light] • [110, Disregarded Stop Sign] • [111, Disregarded Other Traffic Control] • [112, Disregarded Other Road Markings]
Pre-2017	Not available.

ATV / UTV Flag (ATVFLAG)

Definition	Indicates whether an ATV or UTV was involved in a crash with a motor vehicle. Note that ATV or UTV roadway crashes that do not involve a motor vehicle are reported separately through the DNR crash form and are not included in this flag.
Crash Extracts	Not available.

2017-Present	TRUE if for any Vehicle:
	
	    VEHTYPE matches one of:
	
	      • [116, ATV/UTV (Utility Terrain Vehicle)]
	      • [138, ATV]
	      • [139, UTV (Utility Terrain Vehicle)]

Pre-2017	Not available.
Notes	Attribute 116 was deprecated starting Fall 2018. Prior to 2017, the MV4000 combined ATV and Snowplow into one vehicle type attribute.

Bike Flag (BIKEFLAG)

Definition	Indicates whether a bicycle was involved in a crash.
Crash Extracts	BIKEFLAG is a DT4000 derived element, given by: TRUE if for any Unit, UNITTYPE = [6, Bicycle]
2017-Present	TRUE if BIKEFLAG = 'Y' per the DT4000 crash extracts.
Pre-2017	TRUE if BIKEFLAG = 'Y' per the MV4000 crash extracts.

CMV Flag (CMVFLAG)

Definition	Indicates whether a commercial motor vehicle (CMV) was involved in a crash, based on the vehicle configuration as required for FMCSA reporting.
Crash Extracts	CMVFLAG is a DT4000 derived element, given by: TRUE if for any Vehicle, TKBSCFG matches one of: • [101, Vehicle 10,000 Lbs or Less Placarded For Hazardous Materials] • [102, Single-Unit Truck (2-Axle and GVWR More Than 10,000 Lbs)] • [103, Single Unit Truck (3 or More Axles)] • [104, Vehicle Pulling Trailers] • [105, Truck Tractor (Bobtail)] • [106, Truck Tractor/Semi-Trailer] • [107, Truck Tractor/Double] • [108, Truck Tractor/Triple] • [109, Truck More Than 10,000 Lbs, Can Not Classify/Unknown] • [110, Bus (Seats For More Than 15 Occupants, Including Driver)] • [111, Bus/Large Van (Seats For 9-15 Occupants, Including Driver)]
2017-Present	TRUE if CMVFLAG = 'Y' per the DT4000 crash extracts.
Pre-2017	TRUE if CMVFLAG = 'Y' per the MV4000 crash extracts.
Notes	See the Large Truck Flag (LGTRKFLAG) for a general purpose safety flag for large track travel based on vehicle type.

Deer Flag (DEERFLAG)

Definition	Indicates whether a crash was deer related, based on the following criteria: the First Harmful Event involved an alive or dead non-domesticated animal of type deer. Note that many deer crashes are unreported or self-reported through DT4002 driver reports which are not included in Community Maps.

Crash Extracts	DEERFLAG is a DT4000 derived element, given by:
	
	    TRUE if CRSHTYPE matches one of:
	
	       • [143, Non Domesticated Animal (Alive)]
	       • [144, Non Domesticated Animal (Dead)]
	
	    and ANMLTY[XX] = [101, Deer] for any XX

2018-Present	TRUE if DEERFLAG = 'Y' per the DT4000 crash extracts.
2017	Computed directly per the 2018+ DEERFLAG definition.
Pre-2017	TRUE if ACCDTYPE = [3, DEER]
Notes	DEERFLAG was added to the DT4000 Crash Extracts in 2018.

Distracted Driver Flag (DISTRCTD)

Definition	Indicates whether driver distraction was a factor in a crash.
Crash Extracts	Not available.
2017-Present	TRUE if for any Person: DRVRFLAG = 'Y' and one of the following conditions are satisfied: Condition 1: DISTACT matches one of: • [101, Talking/Listening] • [102, Manually Operating (texting, dialing, playing game, etc.)] • [103, Other Action (looking away from task, etc.)] Condition 2: DRVRDS[XX] matches one or more attributes with the exception of: • [101, Not Distracted] • [110, Unknown If Distracted]
Pre-2017:	TRUE if for any Person: DRVRFLAG = 'Y' and DRVRPC[X] matches: • [4, INATTENTIVE DRIVING]
Notes	The multi-valued DRVRDS[XX] was deprecated starting Fall 2018 and replaced by DISTACT and DISTSRC.

Government Property (GOVTPROP)

Definition	Indicates whether a crash involved damage to government property.
Crash Extracts	GOVTPROP is a DT4000 crash level form element.
2017-Present	TRUE if GOVTPROP = 'Y' per the DT4000 crash extracts.
Pre-2017	TRUE if GOVTPROP = 'Y' per the MV4000 crash extracts.

Helmet Flag (HLMTFLAG)

Definition	Indicates whether one or more motorcyclists involved in a crash had failed to use a helmet.
Crash Extracts	Not available.

2017-Present	TRUE if CYCLFAG = 'Y' and for any Person:
	
	    HLMTUSE = [104, No]
	
	    and (
	
	        VEHTYPE = [112, Motorcycle]
	
	        or (UNITTYPE = [3, Motorcycle] and VEHTYPE = [118, Police on Emergency])
	
	        or (VEHTYPE = [137, Autocycle] and OLICTYPE = 'M')
	
	    )

Pre-2017	Not available.
Notes	A motorcycle is defined as a vehicle that requires a Class M license to operate. The CYCLFLAG = 'Y' condition ensures consistency with the crash level Motorcycle Flag.

Impaired Driver (IMPAIRED)

Definition	Indicates whether alcohol or drug use was a factor in a crash, based on the following criteria: a driver was suspected by law enforcement of alcohol or drug use, or a citation was issued.
Crash Extracts	Not available.

2017-Present	TRUE if for any Person:
	
	    DRVRFLAG = 'Y' and (
	
	        ALCSUP = [101, Yes]
	
	        or DRUGSUP = [101, Yes]
	
	        or a STATNM[XX] starts with '346.63'
	
	    )

Pre-2017	TRUE if ALCFLAG = 'Y' or DRUGLFAG = 'Y' per the MV4000 extracts.

Lane Departure Single Unit (LANEDP1U)

Definition	Indicates whether a single unit crash involved a lane departure, based on the First Harmful Event of the crash.
Crash Extracts	Not available.
2017-Present	TRUE if TOTUNIT = 1 and CRSHTYPE matches one of: [106, Motor Veh Tran Other Rdwy] [107, Other Object - Not Fixed] [108, Traffic Sign Post] [109, Traffic Signal] [110, Utility Pole] [111, Lum Light Support] [112, Other Post, Pole or Support] [113, Tree] [114, Mailbox] [115, Guardrail Face] [116, Guardrail End] [117, Bridge Parapet End] [118, Bridge/Pier/Abut] [119, Impact Attenuator/Crash Cushion] [120, Overhead Sign Post] [121, Bridge Rail] [122, Culvert] [123, Ditch] [124, Curb] [125, Embankment] [126, Fence] [127, Other Fixed Object] [128, Overturn/Rollover] [131, Jackknife] [140, Cable Barrier] [141, Concrete Traffic Barrier] [142, Other Traffic Barrier] [147, Fire Hydrant]
Pre-2017	Pending

Lane Departure Multiple Units (LANEDP2U)

Definition	Indicates whether a multi-unit crash involved a lane departure, based on the First Harmful Event or Manner of Collision of the crash.
Crash Extracts	Not available.

2017-Present	TRUE if TOTUNIT > 1 and (
	
	   CRSHTYPE matches one of:
	
	   • [106, Motor Veh Tran Other Rdwy]
	   • [107, Other Object - Not Fixed]
	   • [108, Traffic Sign Post]
	   • [109, Traffic Signal]
	   • [110, Utility Pole]
	   • [111, Lum Light Support]
	   • [112, Other Post, Pole or Support]
	   • [113, Tree]
	   • [114, Mailbox]
	   • [115, Guardrail Face]
	   • [116, Guardrail End]
	   • [117, Bridge Parapet End]
	   • [118, Bridge/Pier/Abut]
	   • [119, Impact Attenuator/Crash Cushion]
	   • [120, Overhead Sign Post]
	   • [121, Bridge Rail]
	   • [122, Culvert]
	   • [123, Ditch]
	   • [124, Curb]
	   • [125, Embankment]
	   • [126, Fence]
	   • [127, Other Fixed Object]
	   • [128, Overturn/Rollover]
	   • [131, Jackknife]
	   • [140, Cable Barrier]
	   • [141, Concrete Traffic Barrier]
	   • [142, Other Traffic Barrier]
	   • [147, Fire Hydrant]
	
	  or MNRCOLL matches one of:
	
	   • [103, Front To Front]
	   • [105, Sideswipe/Same Direction]
	   • [106, Sideswipe/Opposite Direction]
	
	)

Pre-2017	Pending

Large Truck Flag (LGTRKFLAG)

Definition	Indicates whether crash involved a large truck, based on vehicle type.
Crash Extracts	Not available.
2017-Present	TRUE if for any Vehicle, VEHTYPE matches one of: • [119, Straight Truck] • [120, Truck Tractor (Trailer Not Attached) • [121, Truck Tractor (Trailer Attached) • [122, Truck Tractor (More Than One Trailer)
Pre-2017	TRUE if LGTRKFLAG = 'Y' per the MV4000 crash extracts.

Location Type (LOCTYPE)

Definition	Indicates the type of location at which a crash occurred, where: • I – Intersection • N – Non-Intersection • PP – Private Property • PL – Parking Lot
Crash Extracts	Not available.
2017-Present	If RLTNTRWY = [103, Non-Trafficway – Parking Lot] Then 'PL' Else If: CRSHLOC = [102, Private Property] Then 'PP' Else If: INTTYPE = [101, Not At Intersection] Then 'N' Else If: INTTYPE > 101 Then 'I' Else If: INTDIS > 0 Then 'N' Else: 'I'
Pre-2017	Per ACCDLOC from the MV4000 crash extracts.
Notes	The Intersection Flag (INTRFLAG) was removed in March 2024. Select LOCTYPE = 'I' for the equivalent search condition.

Motorcycle Flag (MCYCFLAG)

Definition	Indicates whether a motorcycle was involved in a crash.

Crash Extracts	CYCLFLAG is a DT4000 derived element, given by:
	
	    TRUE if for any Unit:
	        VEHTYPE = [112, Motorcycle]
	        or (UNITTYPE = [3, Motorcycle] and VEHTYPE = [118, Police on Emergency])
	        or (VEHTYPE = [137, Autocycle] and OLICTYPE = 'M')

2017-Present	TRUE if CYCLFLAG = 'Y' per the DT4000 crash extracts.
Pre-2017	TRUE if CYCLFLAG = 'Y' per the MV4000 crash extracts.
Notes	A motorcycle is defined as a vehicle that requires a Class M license to operate.

Pedestrian Flag (PEDFLAG)

Definition	Indicates whether a pedestrian was involved in a crash.
Crash Extracts	PEDFLAG is a DT4000 derived element, given by: TRUE if for any Unit, UNITTYPE = [7, Pedestrian]
2017-Present	TRUE if PEDFLAG = 'Y' per the DT4000 crash extracts.
Pre-2017	TRUE if PEDFLAG = 'Y' per the MV4000 crash extracts.

Occupant Protection (OCCPPROT)

Definition	Indicates whether one or more motorists involved in a crash had failed to use occupant protection.
Crash Extracts	NA
2017-Present	TRUE if for any Person: SFTYEQP = [105, None Used - Vehicle Occupant]
Pre-2017	TRUE if for any Person: SFTYEQP = [88, NONE USED-VEHICLE OCCUPANT]
Notes	Includes all occupant restraint types, including seatbelts and child restraints.

School Bus Flag (BUSFLAG)

Definition	Indicates whether a school bus or motor vehicle functioning as a school bus for a school-related purpose was involved in a crash.
Crash Extracts	BUSFLAG is a DT4000 form element.
2017-Present	TRUE if BUSFLAG matches one of: • [102, Yes, School Bus Directly Involved] • [103, Yes, School Bus Indirectly Involved]
Pre-2017	TRUE if BUSFLAG = 'Y' per the MV4000 crash extracts.

Speed Flag (SPEEDFLAG)

Definition	Indicates whether speed was a factor in a crash based on the following criteria: the reporting law enforcement officer indicated a driver exceeded the speed limit, was driving too fast for conditions, or a citation was issued.
Crash Extracts	NA
2017-Present	TRUE if for any Person: DRVRFLAG = 'Y' and (DRVRPC[XX] matches one or both: • [101, Exceed Speed Limit] • [102, Speed Too Fast/Cond] or STATNMB[XX] starts with '346.57')
Pre-2017	TRUE if for any Person: DRVRFLAG = 'Y' and (DRVRPC[XX] matches one or both: • [1, EXCEED SPEED LIMIT] • [2, SPEED TOO FAST/COND] or (STATNMB[1,2] > '346.55 5' and STATNMB[1,2] < '346.59'))
Notes	346.55(5) was repealed in 1983 Act 77. Using 346.57 for the speed flag was found to be sufficient. Note the Community Maps definition differs from the Crash Facts for 2017-2022, which applies the pre-2017 statute number condition.

Teen Driver Flag (TEENDRVR)

Definition	Indicates whether a crash involved one or more drivers between 13 and 19 years of age regardless of license status.
Crash Extracts	Not available.
2017-Present	TRUE if for any Person: DRVRFLAG = 'Y' and AGE >= 13 and AGE <= 19
Pre-2017	Backfilled per same definition.
Notes	The Teen Driver definition was changed in March 2024 to cover drivers between 13 and 19 years of age. It previously included drivers between 16 and 19 years of age. Prior year flag values have been updated accordingly.

65+ Driver Flag (65+DRVR)

Definition	Indicates whether a crash involved one or more drivers of age 65 years or older.
Crash Extracts	Not available.
2017-Present	TRUE if for any Person: DRVRFLAG = 'Y' and AGE >= 65
Pre-2017	Backfilled per same definition

Train Flag (TRAINFLAG)

Definition	Indicates whether a railway train was involved in a crash.
Crash Extracts	Not available.
2017-Present	TRUE if for any Vehicle: VEHTYPE = [128, Railway Train]
Pre-2017	TRUE if for any Vehicle: VEHTYPE = [18, RAILWAY TRAIN]

Winter Road Flag (WNTRROAD)

Definition	Indicates whether a crash occurred on a winter road based on the following: the Road Surface Conditions were reported as ice, slush, or snow.
Crash Extracts	Not available.
2017-Present	TRUE if RDCOND[XX] matches one or more: • [103, Snow] • [104, Slush] • [105, Ice]
Pre-2017	Not available.
Notes	The Pre-2017 MV4000 HWYPC[XX] element combined SNOW/ICE/WET into one attribute.

Work Zone Flag (CONSZONE)

Definition	Indicates whether a crash occurred in a construction, maintenance, or utility work zone or was related to activity within a work zone.
Crash Extracts	CONSZONE is a DT4000 form element.
2017-Present	TRUE if CONSZONE = 'Y' per the DT4000 crash report
Pre-2017	TRUE if CONSZONE = 'Y' per the MV4000 extracts

Hit and Run Crash (HITRUN)

Definition	Indicates whether a crash involved at least one hit and run unit.
Crash Extracts	TRUE if for any Vehicle: UNITTYPE is one of: • [1, Automobile] • [2, Truck] • [3, Motorcycle] • [4, Bus] • [5, Bike] And UNITSTAT is one of: • [102, Hit and Run/On Emergency] • [103, Hit and Run] • [107, Stolen/Hit and Run]
2017-Present	TRUE if HITRUN = 'Y' per the DT4000 crash extracts
Pre-2017	TRUE if HITRUN = 'Y' per the MV4000 crash extracts.
Notes	The Crash Extracts definition went into effect 2020. Prior years applied the DT4000 Hit and Run form element.

Section 3: Revision History

Date	Author	Description
3/11/2024	Parker	Initial version of the Technical Definitions document. The Community Maps crash flag values have been modified in some cases to align with the definitions in this document. Specifically: • The Teen Driver flag definition has been revised to include all drivers between 13 and 19 years of age regardless of license status. All prior year flag values have been backfilled to match the new definition. • Limited the Speed Flag statute number comparison to the 346.57 series. Prior year flag values from 2017 to present have been backfilled to match the new definition. • Added a Large Truck Flag based on vehicle type, which provides a general purpose flag for large truck safety analysis. The CMV flag is still available for commercial motor vehicle enforcement purposes. • New flags have been added intermittently, including Hit and Run and Winter Road flags. • Intersection Flag has been removed. The new Location Type filter provides generalized functionality. • Minor corrections to flag values from 2010 to present have been applied to align all crash flags to the technical definitions in this document.